TECHNOLOGY DEPT.

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DETROIT

NEW EQUIPMENT DIGEST

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September, 1953

Volume 18—Number 9

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CHECK AND PASS ALONG

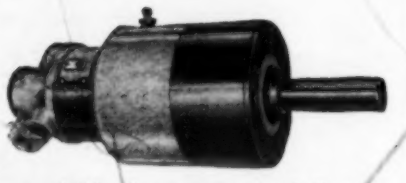
✓	NAME	See No.

Use Inquiry Slips—pages 8 and 104

EQUIPMENT MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

AIR MOTORS
in ratings from ½ to 2¾ hp

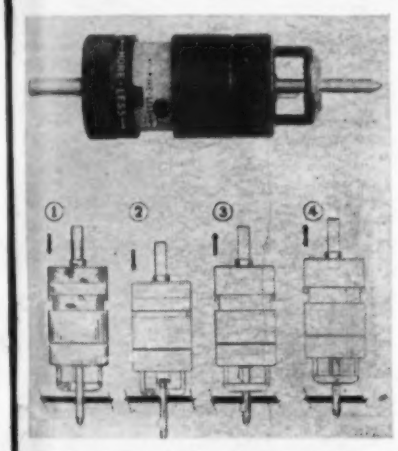
Compact and instantly reversible, series 70A air motors are available in ratings from ½ to 2¾ hp in 12 speed and torque combinations. They feature an axial piston design, which results in air consumption figures ranging between 21 and 83 cfm, dependent upon horsepower.



Speeds are infinitely variable from zero to full rpm, and consistent torque output is achieved on low as well as high air pressure. Suitable applications include valve closing, in agitators, tilting tables and variable speed drives for overhead cranes. Made by **Keller Tool Co.**, Dept. N, Grand Haven, Mich.

▲ For more details circle **NED-1 J3** on enclosed inquiry slip ▲

AUTOMATIC DEBURRING TOOL
speeds sheet metal fabrication

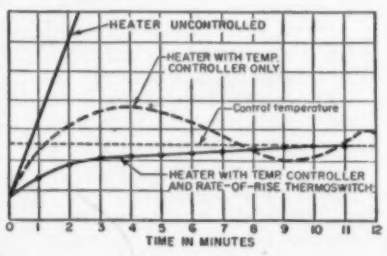


Simultaneous deburring and chamfering of both front and back faces of holes in sheet metal, plate, extrusions, castings and forgings is possible with this Noburmatic tool. Usable in portable electric or pneumatic tools as well as in drilling machines and turret lathes, tool automatically deburs front face during entry and rear side during the withdrawal cycle. Models are offered for nonferrous metal and other soft materials and for ferrous and relatively tough materials in standard tool sizes from 0.125 to 0.257-in. Made by **Nobur Mfg. Co.**, 717 N. Victory Blvd., Burbank, Calif.

▲ For more details circle **NED-2 J3** on enclosed inquiry slip ▲

RATE-OF-RISE THERMOSTAT
designed for fast warm-up systems

Capable of controlling the rate of heating as well as preventing hazardous temperature overshooting in fast warm-up electric heating systems, this rate-of-rise Thermoswitch can be set to actuate at any heating rate between 10 to 100° F per minute at ambient temperatures between −100 and 550° F. Unit can be used either with standard temperature controls or as a separate safety controller. Device has a stainless steel outer shell and stainless exterior electrical terminals. Triangular flange provides for mounting the 4¾-in. long, ⅝-in. diameter cartridge. Electrical rating is 5 amp at 115 v ac. Illustration shows comparison in initial temperature control with and without the use of the rate-of-rise Thermoswitch. Made by **Fenwal Inc.**, 70 Pleasant St., Ashland, Mass.



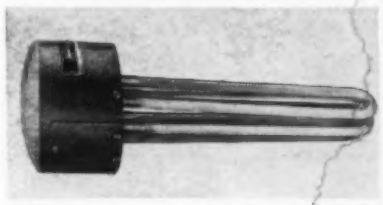
▲ For more details circle **NED-3 J3** on enclosed inquiry slip ▲

WELDING ELECTRODES
join low alloy to stainless steels

Light sections of low and medium alloy steel and stainless steel types 301, 302, 320B and 303 can be jointed with EutecTrode 69AC and 690-DC welding electrodes. Features include high strength, heat and corrosion resistance, wear resistance, impact strength and good rate of alloy deposition per electrode. Smooth running deposits of good appearance are produced and slag removal is easy. Electrodes are made in 3/32, 5/32 and 3/16-in. sizes. Made by **Eutectic Welding Alloys Corp.**, Dept. P, 172nd St. & Northern Blvd., Flushing 58, N. Y.

▲ For more details circle **NED-4 J3** on enclosed inquiry slip ▲

ELECTRIC IMMERSION HEATER
capacities range from 4 to 12 kw

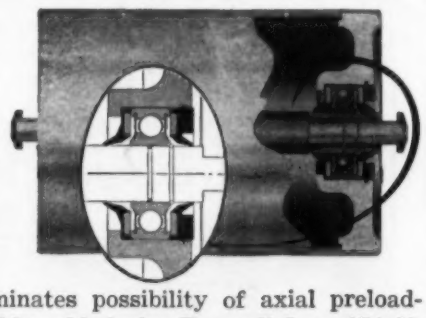


Of the flanged tubular type, this Chromalox electric immersion heater is available as type TM-4 with copper sheathed elements brazed to a brass flange for water heating and as type TMO-4 with steel sheathed elements welded to a cast iron flange for oil or paraffin. Both have 5⅜-in. diameter flanges. They are single phase only and are available in 120, 240, 480 and 550 v ratings with capacities ranging from 4 to 12 kw. Made by **Edwin L. Wiegand Co.**, 7509 Thomas Blvd., Pittsburgh 8, Pa.

▲ For more details circle **NED-5 J3** on enclosed inquiry slip ▲

BELT CONVEYOR IDLERS
permanently lubricated type

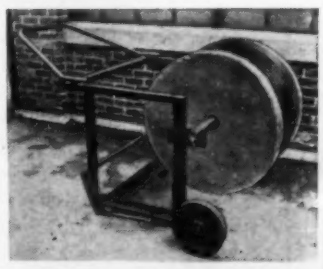
Molded bearing cavity closures on both sides of each bearing which assure protection against abrasives and moisture are a design improvement incorporated in Tran-Seal belt conveyor idlers. Heavy duty type bearing is permanently sealed and packed with synthetic lubricant. Method of mounting bearing now eliminates possibility of axial preloading in the assembly. Made by **Transall Inc.**, 154 N. Eleventh St., Birmingham 4, Ala.



▲ For more details circle **NED-6 J3** on enclosed inquiry slip ▲

CABLE REEL TRUCK
handles various size reels

With an adjustable trunnion for handling various size reels, this one-man cable reel truck has a structural frame with tubular push bar construction. Two caster and two main wheels are provided, together with a foot-operated brake to lock unit in position when unreeling cable. Truck tilts forward to pick up reel by its center bar. Made by **Lewis-Shepard**, Dept. R-27, Watertown 72, Mass.



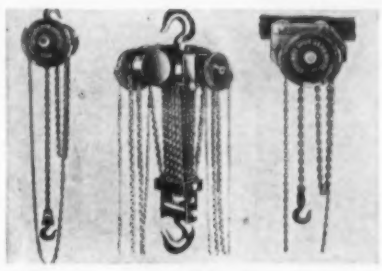
▲ For more details circle **NED-7 J3** on enclosed inquiry slip ▲

GAS FIRED UNIT HEATERS
20,000 to 160,000 Btu per hour

Seven sizes of gas-fired Herman Nelson unit heaters are suitable for use on all types of natural, manufactured and liquefied petroleum gases. Heat outputs range from 20,000 to 160,000 Btu per hour, with fan diameters from 12 to 20 in. Finished in grey-green baked enamel, units are suited for installation in small plant offices where central heating may not be available and where appearance is a prime factor. Made by **American Air Filter Co.**, 391 Central Ave., Louisville 8, Ky.

▲ For more details circle **NED-8 J3** on enclosed inquiry slip ▲

SPUR GEAR HOISTS
many units added to line

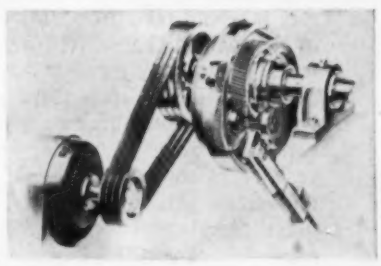


Among the types and sizes of spur gear hoist added to the Coffing line are (left) eight single-chain models in ¼ to 2-ton capacities, (center) 14 multiple chain models in 3 to 25-ton capacities and (right) 11 army type trolley hoists in ¼ to 10-ton capacities. In the army and low headroom models, hoist is an integral part of the trolley, which can be plain or geared. This permits hoists to be used where headroom is limited. Similarly, there are clevis-connected hoists where headroom is again saved by removing the top hook and suspending trolley from a specially designed clevis. This method of connection saves from 3 to 16 in. of headroom, depending on hoist size. Other units allow the operator to stand up to 10 ft away from the load. Made by **Coffing Hoist Co.**, 801 Walter St., Danville, Ill.

▲ For more details circle **NED-9 J3** on enclosed inquiry slip ▲

SPEED REDUCERS
are 13 : 1 ratio, shaft-mounted units

Shaft-King 13-to-1 ratio shaft-mounted speed reduction units, which retain features of the original 20-to-1 series, are adaptable to any shaft size up to 3 15/16 in. V-belt drive type units are compact, requiring only standard shaft lengths (twice the shaft diameter plus clearance) to be mounted directly on the shaft of the driven machine. Gearing and bearings are splash lubricated. Both input and output shaft are above the oil level, eliminating the necessity for bearing seals to operate against a head of oil. For protection against sudden overloads, reducers can be equipped with American torque-arm overload release. Made by **American Pulley Co.**, 4245 Wissahickon Ave., Philadelphia 29, Pa.



▲ For more details circle **NED-10 J3** on enclosed inquiry slip ▲

NOW WHAT?

Diversatility SCORES AGAIN!

A New BUT Thoroughly Proven VALVAIR SOLENOID PILOT-OPERATED CONTROL VALVE for a myriad of uses!

Expect and get 20,000,000 cycles and more without maintenance. Most compact — extremely small, weighs very little. Just one moving part — the acme of simplicity and trouble-free performance. Complete line — 30 valves in all. Get all the details NOW.

More information next month

ASK ON YOUR LETTERHEAD FOR BULLETIN "N-9"

VALVAIR CORPORATION, 949 Beardsley Ave., Akron 11, Ohio
AFFILIATE: SINCLAIR-COLLINS VALVE CO.

Rely Upon Valvair 2-WAY 3-WAY 4-WAY

▲ For more details circle NED-11 J3 on enclosed inquiry slip ▲

Use of PYREX pipe in acid drain lines eliminates corrosion.

Eliminate pipeline corrosion with PYREX® Glass Pipe brand

Chemical plants have been using PYREX brand Glass Pipe for years to solve their severest pipeline corrosion problems. Other industries are discovering its advantages for acid drain lines and other chemical handling lines.

PYREX pipe will withstand virtually all acids and most alkalis. For example, carrying 5% hydrochloric acid at 212° F. continuously, PYREX pipe loses only .0003" of its thickness a year. At that rate it would take over 200 years to eat away 30% of the wall thickness. It would take over 600 years to eat completely through the pipe.

In addition to such sturdy corrosion resistance, PYREX offers such advantages as transparency (you can spot trouble in the line before it gets serious); ease of cleaning; exceptional resistance to sudden temperature changes and physical shock. Long-time users report that breakage is no problem. Your own men can install it without special training or experience.

PYREX Pipe Bulletin EA-1 will give you a more detailed story. Write for a copy today or check the indicated reference number on the enclosed Inquiry Slip.

CORNING GLASS WORKS
CORNING, N. Y.

Corning means research in Glass

▲ For more details circle NED-12 J3 on enclosed inquiry slip ▲

PLASTIC HOLE PLUGS
pressed into position with fingers

Round or square holes ranging from ⅛ to over 1-in. diameter in assembled products from autos to household appliances can be closed up by these plastic hole plugs. Easily pressed into position with only the fingers, plugs provide a moistureproof seal. They are available in wide choice of colors for matching purposes. An example of their application is the sealing of holes in inner liners of refrigerators to prevent air circulation between walls. Made by **Illinois Tool Works**, Shakeproof Div., 2503 N. Keeler Ave., Chicago 39, Ill.

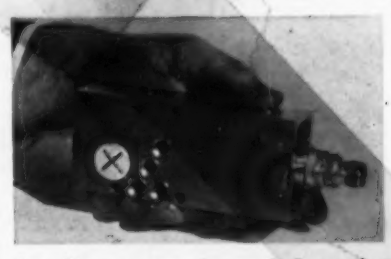
▲ For more details circle NED-13 J3 on enclosed inquiry slip ▲

DRAWN STEEL WHEEL
made in 4, 5, and 6-in. sizes

Designed for operating loads up to 2000 lb each, series of 4, 5 and 6-in. drawn steel wheels will support a static load of 4 tons per caster. Flat tread withstands shocks from rough flooring and curbs, and a dust cap keeps out dirt and retains lubricant in the bearing. Made by **Faultless Caster Corp.**, Dept. NED, 1940 Clarence St., Evansville 7, Ind.

▲ For more details circle NED-14 J3 on enclosed inquiry slip ▲

HYDRAULIC SERVO VALVE
is two-stage, four-way type



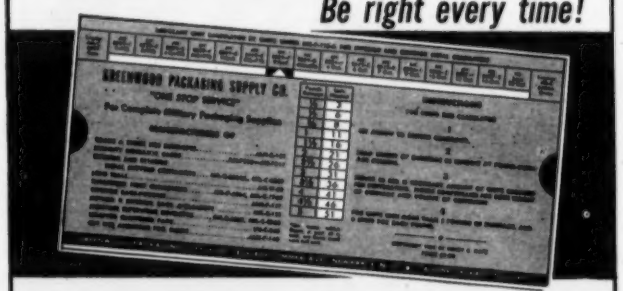
This two-stage, four-way servo valve with internal mechanical feedback for transforming low-level electrical information into controlled hydraulic energy is sealed against magnetic particles and will operate without oil filters. It exerts 500-lb clearing force in first stage to remove sludge or metal particles. Frequency response is flat from 0 to 150 cps. It has linear output up to 14 hp, with no external leakage and zero signal leagage of 60 cc/minute. Power amplification is 5000 with pressures up to 3000 psi. Input power is less than 2 w; input current, 15 ma; resolution, 0.03 per cent; and time constant, 0.001-second. The 1¾-lb unit has 18 cu in. volume and flow of up to 12 gpm. Made by **Sanders Associates, Inc.**, 131 Canal St., Nashua, N. H.

▲ For more details circle NED-15 J3 on enclosed inquiry slip ▲

Only $2.00 Only $2.00

Eliminate Errors! with New GREENWOOD DESICCANT CALCULATOR for Method II Packaging under MIL-P-116B

Be right every time!



Useful, time-saving calculator shows in a second how many desiccant units are required per package in accordance with Formula 1 or Formula 2, as per Par. 3.5.7.1.2. of MIL-P-116B.

One side for rigid containers (Method 2D); the other side for flexible containers (Method 2A, 2B, 2C, 2E).

Clearly indicates the number of desiccant units required for all interior and exterior metal containers, specs MIL-C-5054A & MIL-C-6055; and for all flexible barrier containers, meeting specs MIL-B-131B, MIL-C-6060, MIL-C-6056, and MIL-B-7841 (AER).

Mail today

GREENWOOD PACKAGING SUPPLY CO. 861 Summer Ave., Newark 4, N. J.

Please send postpaid _____ GREENWOOD DESICCANT CALCULATOR(S) at $2 each

Enclosed is $_____

Name _____

Firm _____

Address _____

City _____ Zone _____ State _____

▲ For more details circle NED-16 J3 on enclosed inquiry slip ▲

DELRAC Resiment

the Furane Resin Cement that

- RESISTS CORROSION — Acids, Alkalies, Solvents
- SETS PERFECTLY — Summer or Winter
- WITHSTANDS HEAT — Temperatures up to 375° F.

Highly efficient as a mortar for corrosion resistant masonry, Resiment is low in porosity and high in compressive and tensile strength. It is supplied in the form of powder and liquid, in proper combinations, for mixing at time of use. Sets quickly by internal chemical reaction.

Write for Folder and Prices

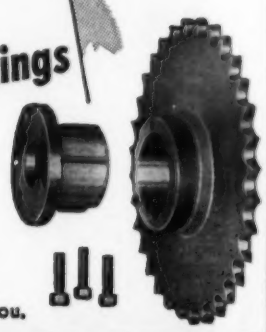
DELRAC CORPORATION
133 Mill St. Watertown, N. Y.

▲ For more details circle NED-17 J3 on enclosed inquiry slip ▲

Browning SPROCKETS

OFF-THE-SHELF
READY-FOR-USE
A Time and Money Saver with

Split Taper Compression Bushings
• NO REBORING
• NO WELDING

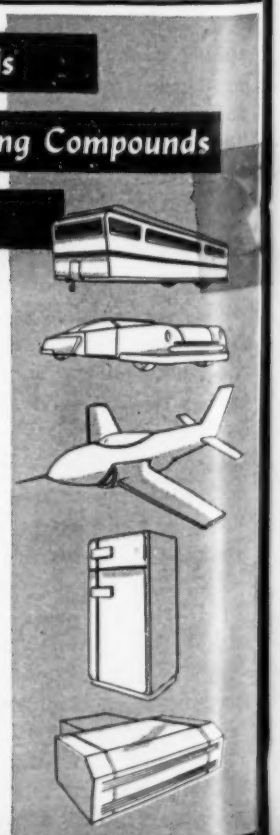


Write for Catalog CD 101.
There's a Browning Distributor near you.

BROWNING MANUFACTURING COMPANY MAYSVILLE · · · KENTUCKY

▲ For more details circle NED-18 J3 on enclosed inquiry slip ▲

Your 1955 Models Require New Sealing Compounds Today



As often as product designs change, new sealing problems arise. Staple sealants are not always the most effective answer.

Presstite's Research and Development Laboratories, specializing exclusively in sealing compounds, thrive on the challenge to formulate new sealants for new products, new models, new requirements of *any* industry.

Protect the quality and performance you so carefully plan. Consult our experienced sales engineers who will gladly recommend or have our laboratories formulate the very best sealant for your needs.

PRESSTITE SEALING COMPOUNDS

PRESSTITE ENGINEERING COMPANY
3742 Chouteau Ave. St. Louis 10, Mo.

▲ For more details circle NED-19 J3 on enclosed inquiry slip ▲

APPLETON "ST" Series CONNECTORS* for Liquid Tight Flexible Conduit

The ONLY Fittings of Their Kind!

Quick, Easy to Install!

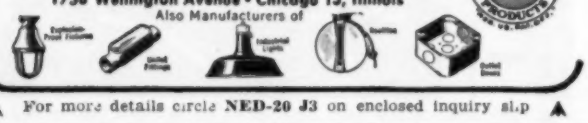
SEAL WIRING SYSTEMS AGAINST OIL, WATER, DIRT, GREASE, ACIDS and CHEMICALS

• Here are flexible conduit connectors with a big plus! Appleton "ST" Series Connectors not only stay tight, but assure positive exclusion of liquids, fumes, chips, shavings and other foreign matter from machinery electrical systems. As a result, costly shutdowns and loss of man hours are eliminated!

Appleton "ST" Series Connectors come in straight, 45° and 90° to fit flexible conduit sizes from ⅜" to 1¼". Also, 1½" and 2" straight. They provide a positive ground between conduit and connectors and maintain voltage within 10 millivolts drop.

For complete information, contact your wholesaler or write, today!

APPLETON ELECTRIC COMPANY
1758 Wellington Avenue • Chicago 13, Illinois
Also Manufacturers of

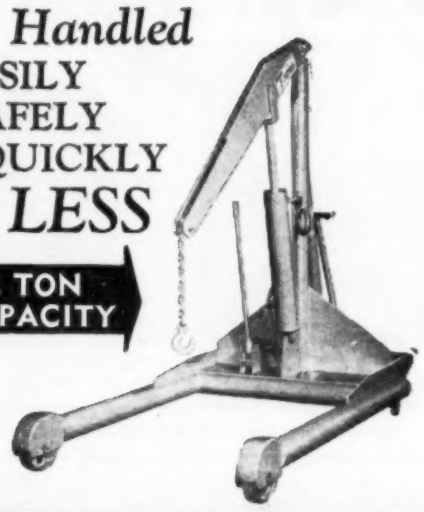


▲ For more details circle NED-20 J3 on enclosed inquiry slip ▲

BULKY, AWKWARD, HEAVY LOADS

Handled
• EASILY
• SAFELY
• QUICKLY
for LESS

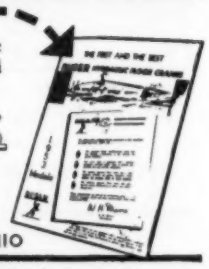
2 TON CAPACITY



SUBSTITUTE FOR AN ELEPHANT®

GET THIS BOOK

Gives all the facts about Ruger's complete line of hydraulic floor and truck mounted cranes, capacities 1000 to 6000 lbs.



RUGER CRANES

619 West Fourth St. UHRICHSVILLE, OHIO

▲ For more details circle NED-21 J3 on enclosed inquiry slip ▲

KNEE SAFETY!

..IN YOUR PLANT

JUDSEN KNEE PADS
for every down-on-the-knees job!

Alert Safety Directors and Plant Executives throughout the country have been quick to recognize the benefits offered by JUDSEN "*Cushion Soft*" KNEE PADS:

- Increased Work Efficiency!
- Less Fatigue! Less Time-Out!
- Protection Against Injuries!

Neat, durable, compact JUDSEN KNEE PADS are as easy to wear as gloves . . . *kneeling* . . . *standing* . . . *walking*. Find out about this AID TO PRODUCTION EFFICIENCY today. ASK YOUR SUPPLIER OR WRITE.

JUDSEN RUBBER WORKS, INC.
4107 WEST KINZIE STREET, CHICAGO 24
Manufacturers MOLDED • EXTRUDED • SPONGE Since 1901

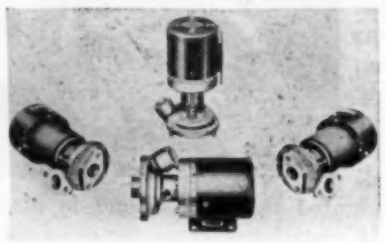
▲ For more details circle NED-22 J3 on enclosed inquiry slip ▲

AIR COMPRESSOR delivers 3½ cfm at 100 psi

A tank is not required by this series J air compressor which delivers a continuous volume up to 3½ cfm and maximum pressure of 100 psi. Air devices can thus be supplied with pressure at a production station, jig or outdoor location without necessity of running piping from plant air supply. Continuous running is compensated for during air equipment operation. Unit weighs 40 lb and has ⅓-hp, 115/230-v motor with overload protection switch and capacitor. Made by **Modernair Corp.**, Dept. NED, 400 Preda St., San Leandro, Calif.

▲ For more details circle NED-23 J3 on enclosed inquiry slip ▲

MULTI-PURPOSE PUMPS motors range from 1/100 to 1/12 hp



Serving a wide range of applications, these small pumps are available in a variety of specifications and are usually equipped with bronze body and impeller, stainless shaft and motor ranging from 1/100 to 1/12 hp. They can be used as coolant pumps for soluble oil, pumps for all types of liquids and other uses where it is desired to move water at any temperature up to 210° F. Deliveries range up to 22 gpm at up to 21 ft head. Made by **Taco Heaters, Inc.**, 135 South St., Providence 3, R. I.

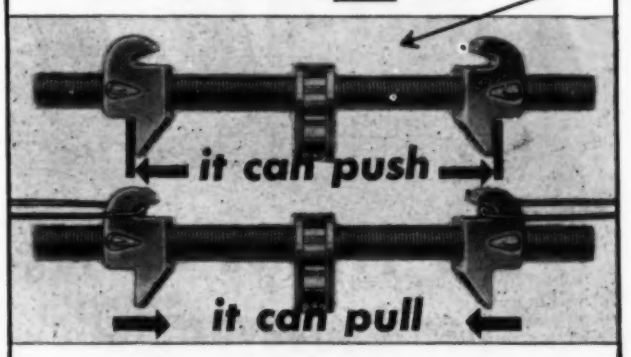
▲ For more details circle NED-24 J3 on enclosed inquiry slip ▲

STEPLESS TEMPERATURE CONTROL models to handle 300 va to 110 kva

This stepless temperature control has no relay and supplies only enough power to heating element to hold temperature for which it is set. Heater operates at full power only on initial temperature rise. Reading is indicated on 5-in. scale, mirrored for parallax correction. Green pilot light indicates when power is applied to controller; white light shows degree of power supplied to heating element. Instrument uses standard television service vacuum tube. Models are offered to handle 300 va to 110 kva loads. Made by **West Instrument Corp.**, 527 N. Noble St., Chicago 22, Ill.

▲ For more details circle NED-25 J3 on enclosed inquiry slip ▲

This handy tool can pay for itself on one job!



It's a combination screw jack with ratchet lever socket. An ideal tool for pulling together or pushing apart steel plates, beams, pipe, tightening conveyors, straightening equipment. Precision made in 3 models—10 and 15-ton capacities; weighs 46, 50, and 97 lbs.; in length 24, 28, and 38 inches. For complete information, including prices and delivery, ask your local distributor or write the world's oldest and largest manufacturer of lifting jacks for bulletin AD-9 N, The Duff-Norton Manufacturing Co., P.O. Box 1889, Pittsburgh 30, Pa. Canadian plant—Toronto 6, Ontario.

DUFF-NORTON JACKS
"Giving Industry a Lift Since 1883"

▲ For more details circle NED-26 J3 on enclosed inquiry slip ▲

BE READY FOR Every CLEANING NEED

IDEAL BLO-R-VAC

Triple Value!
A "Tank-Type" Cleaner
A "Hand-Type" Cleaner
A Blower-Sprayer

All in One!

CONVERTS IN A JIFFY! . . . from a "tank-type" cleaner to a "hand-type" cleaner or blower.

Power-packed and with highest cleaning efficiency, IDEAL Blo-R-Vac speeds *all* your cleaning jobs! Low in first cost, it's actually *three rugged cleaners in one!* Vacuums lint, dirt, picks up water. Promotes scrap salvage — metal particles stay in big tank; lighter particles go into dust-tight bag. Power unit serves as a separate blower-sprayer or hand type cleaner. Full selection of attachments. 1½ or ⅔ H.P.

Sold Through America's Leading Distributors
Canadian Distributor: Irving Smith, Ltd., Montreal

TRY IT FREE!

IDEAL INDUSTRIES, INC.
1032 Park Ave., Sycamore, Illinois
Arrange FREE DEMONSTRATION of your new BLO-R-VAC in our plant.
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Company_____
Address_____
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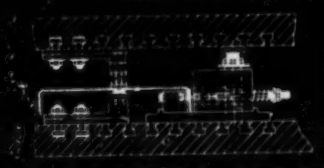
▲ For more details circle NED-27 J3 on enclosed inquiry slip ▲

Whistler Adjustable and Magnetic Perforating Dies are stepping up production for over 1,000 manufacturers

Simplify Complicated Piercing Operations



• Use this HU-50 90° Perforating Unit on the same job with other Whistler Dies . . . often saves extra press operations.

USE WHISTLER Adjustable and Magnetic Dies for perforating, notching and slotting sheet metals . . . fast, accurate and cost cutting. Complicated patterns can be set up quickly. Hole arrangements can be changed in the press . . . without waiting and at no extra die cost. New HU-50 units, that pierce at 90° angle, can be used in conjunction with standard perforating equipment. Fewer press operations are necessary.

Re-use the same dies in different arrangements on many jobs. Punches and dies are interchangeable.

Whistler Adjustable Dies can be used in practically every type press. Standard sizes and shapes of punches and dies available up to 3 inches. Special sizes and shapes to order.

S. B. WHISTLER & SONS, INC.
750 Military Road
Buffalo 23, N. Y.

For prices and application data on this modern way to speed production and cut unit costs, write for these illustrated Whistler catalogs.

Visit us at Booth 2024—National Metal Show—Oct. 19-23.

▲ For more details circle NED-28 J3 on enclosed inquiry slip ▲

STEEL

Every Kind

Our stocks of Certified Quality Steel are large and becoming more complete. Quick, dependable service is assured.

NEARBY STOCKS INCLUDE:

BARS—carbon & alloy, hot rolled & cold finished
STRUCTURALS—channels, angles, beams, etc.
PLATES—U, M. & sheared, Inland 4-Way Floor Plate
SHEETS—hot & cold rolled, many types & coatings
TUBING—seamless & welded, mechanical & boiler tubes
STAINLESS—Allegheny sheets, plates, bars, tubing, etc.
REINFORCING bars & access.
BABBITT bearing metal
MACHINERY & TOOLS for metal fabrication

RYERSON

Joseph T. Ryerson & Son, Inc. Plants: New York, Boston, Philadelphia, Detroit, Cincinnati, Cleveland, Pittsburgh, Buffalo, Chicago, Milwaukee, St. Louis, Los Angeles, San Francisco Spokane, Seattle

For more details circle NED-29 J3 on enclosed inquiry slip

Is this your soldering problem, too?

Higher Speed with Smaller Tips?

The answer is—

HEXACON

SUPER POWERED SOLDERING IRONS

SIX MODELS TO CHOOSE FROM

TIP DIA.	WATTS	CAT. NO.
1/4	100	P-114
1/4	150	P-154
1/4	200	P-214
3/8	200	P-238
1/2	200	P-212
3/8	300	P-338

Solder Faster with Lower Tip Cost!

For example, Cat. P-214 has more speed than conventional 200 watt iron, but takes 1/4" tip instead of 5/8" *(only 1/6th the copper).*

Write for Catalog showing 40 industrial soldering irons of every type and size; no obligation.

HEXACON ELECTRIC CO.
145 WEST CLAY AVENUE, ROSELLE PARK, NEW JERSEY

HEXACON — Industry's No. 1 Soldering Iron

For more details circle NED-30 J3 on enclosed inquiry slip

48 FACT PACKED PAGES on CHROMALOX Electric HEATERS

IB-29

THIS COMPREHENSIVE CATALOG MAY SAVE YOU VALUABLE TIME AND MONEY, HELP IMPROVE PRODUCTION

You'll find an efficient and economical answer to most of your heating needs in Catalog 50. It includes valuable application ideas and heat calculation data you'll find useful in your work. There are more than 15,000 standard Chromalox Units—most of them stocked for immediate application to your heating jobs.

Get your copy NOW from

Industrial Division
EDWIN L. WIEGAND CO.
7509 Thomas Boulevard
Pittsburgh 8, Pa.

See other ad on pg. 55

CHROMALOX
ELECTRIC HEAT FOR MODERN INDUSTRY

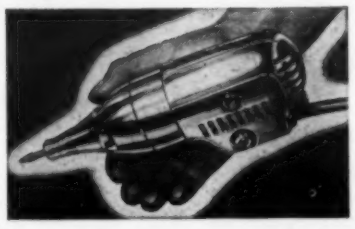
For more details circle NED-31 J3 on enclosed inquiry slip

TORQUE-LIMITING WRENCHES are calibrated in pound inches

Including three with plain and three with ratchet heads, these six Proto torque-limiting wrenches are calibrated in pound inches with capacities of 100-750 and 700-1600 lb-in. Drive sizes are 3/8 and 1/2-in. They release at the proper setting and reset themselves automatically, having an enclosed precision spring as the principal torque-controlling element with micrometer-type adjustment. Made by **Plomb Tool Co.**, Dept. D, 2209 Santa Fe Ave., Los Angeles 54, Calif.

For more details circle NED-32 J3 on enclosed inquiry slip

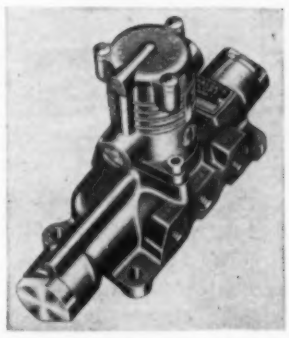
ELECTRIC HAND TOOL no-load spindle speed is 45,000 rpm



Suitable for carbide midget mills as well as all other rotary tools for grinding, milling, finishing and polishing within a shank range from 3/32 to 3/16-in., Super 30 electric hand-tool can be used mounted if required and is also available with 1/8, 3/16 and 1/4-in. arbors for precision internal grinding and milling. Features include 1/5-hp motor; balanced spindle; precision collet chuck; sealed ball bearings; air cooling; built-in overload cutout; and precision machined mounting surfaces. Tool weight is 32 oz, and various accessories are available. Made by **Precise Products Co.**, 1346 Clark St., Racine 11, Wis.

For more details circle NED-33 J3 on enclosed inquiry slip

AIR CONTROL VALVES solenoid pilot operated design



Available for three-way, four-way and four-way five port (two pressure) applications in 1/4 through 1-in. pipe sizes, solenoid pilot-operated air control valves are for 35 to 150-psi pneumatic service and low pressure oil-hydraulic service. All types and sizes are furnished either for foot mounting or for sub-base manifold mounting in accordance with JIC specifications. Operating speeds are as high as 600 cycles per minute. All units feature maintenance of full pipe orifice through the valves. Made by **Valvair Corp.**, Morgan Ave., Akron 11, O.

For more details circle NED-34 J3 on enclosed inquiry slip

X-Series

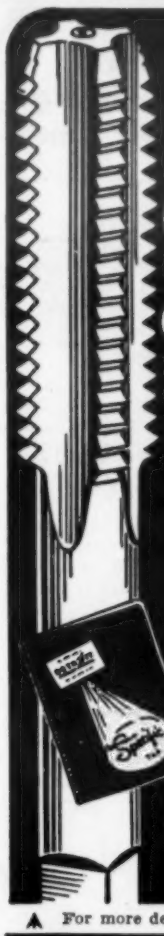
Low-Friction Bearing For Conveyor Rolls

Logan leads again — with the most important bearing development for conveyor rolls in twenty years. Now available at about same price as regular conveyor bearings. Note: 33% less grade required on gravity conveyor lines. Write for folder on X-Series, today.

For Roller Conveyors — For Live Roll Conveyors — For Belt Conveyors

LOGAN CO., 215 CABEL ST., LOUISVILLE, KY.

For more details circle NED-35 J3 on enclosed inquiry slip



Now you can specify standard

Specific TAPS

specifically engineered *for 6 Specific Materials.* They give you added tap life *at No Increase in Cost* over 'general-purpose' taps.

Find out today how SPECIFIC taps can improve your tapping operations and cut your tapping costs. Ask for Bulletin ST 52

DETROIT TAP & TOOL CO.
DETROIT MICHIGAN

For more details circle NED-36 J3 on enclosed inquiry slip

FOR LOW-COST REVERSIBLE ROTARY MOTION

Specify

HYDRECO FLUID MOTORS

HYDRECO Four-Bolt, Gear-Type Hydraulic Motors provide economical and reliable rotary motion in either direction.

Performance Data—HYDRECO Fluid Motors

Motor Series	Horsepower at 2000 rpm, 1000 psi	GPM required at 2000 rpm	Torque Output (in pounds–inches) at 1000 rpm, 1000 psi
1500	3 to 8	7 to 16	98 to 253
2000	8 to 17	19 to 38	275 to 575
3000	15 to 52	34 to 120	520 to 1770

Write for complete information on HYDRECO Fluid Motors, Gear Pumps, Control Valves, Auxiliary Valves and Cylinder Assemblies.

HYDRECO DIVISION OF THE NEW YORK AIR BRAKE CO.
1108 EAST 222nd STREET • CLEVELAND 17, OHIO

For more details circle NED-37 J3 on enclosed inquiry slip

SOLVE ALL YOUR SKIDDING & SLIPPING PROBLEMS

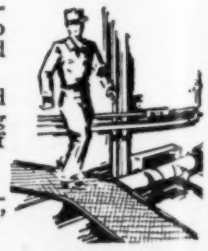
with **Bustin** FIRM-GRIP

SAFETY GRATING

Bustin FIRM-GRIP* grating guarantees safe, comfortable walking under the most adverse conditions where grease, oil or water can cause accidents from slipping.

FIRM-GRIP is acclaimed by Safety Engineers of major industrial concerns for its exceptional traction quality and other safety features due to the unique assembly and engineered spacing of the contact points.

Made in various designs and sizes and adaptable for installation on skidding problem spots where other makes of gratings cannot be considered.



"Bustin — Designers and Manufacturers of Metal Products Since 1928"

Bustin FIRM-GRIP GRATING CORP.
110 E. 130 Street, New York 37, N. Y.

*Pat. Pending

Send for Complete Literature

For more details circle NED-38 J3 on enclosed inquiry slip

WHY R-B PUNCHES
are Easier to Use

Just a push, a twist, and "click" your R-B punch or die button is accurately ALIGNED and LOCKED in place. The R-B ball lock prevents radial or vertical movement of the punch or die button in the retainer—no additional keying is required.

R-B punches and die buttons are just as easy to remove—simply insert tanged tool in retainer hole to release ball lock. Standardized and completely interchangeable in any shape or size, these easy to use punches and die buttons save your time and energy.

RICHARD BROTHERS PUNCH DIVISION
ALLIED PRODUCTS CORPORATION
DEPT. 74 • 12629 BURT ROAD • DETROIT 23, MICHIGAN

Also Produced in OTHER ALLIED PLANTS
SPECIAL COLD FORGED PARTS • STANDARD CAP SCREWS
PRECISION GROUND PARTS • SHEET METAL DIES MADE OF FERROUS ALLOYS, ZINC ALLOYS OR PLASTICS

▲ For more details circle NED-39 J3 on enclosed inquiry slip ▲

Check with **FAIRFIELD** *for FINE GEARS*

MASS production of fine gears is an accomplishment that requires the ultimate in manufacturing facilities and experience. And it's all here at Fairfield—metallurgical department, batteries of the most modern machines, complete heat treating equipment, all operated by skilled craftsmen producing truly fine gears. Here is more than 30 years of experience translated into the gear-making "know-how" that is essential to manufacturing high quality, dependable gears.

Our facilities are complete for producing gears for a wide variety of applications. Why not consult Fairfield on your next gear problem? Your inquiry will receive prompt attention.

Fine Gears Made to Order:
SPIRAL BEVEL
STRAIGHT BEVEL
HYPOID
HERRINGBONE
HELICAL
DIFFERENTIALS
SPUR
WORMS AND WORM GEARS

FAIRFIELD MANUFACTURING CO.
2335 S. Concord Road Lafayette, Indiana

▲ For more details circle NED-40 J3 on enclosed inquiry slip ▲

New usalite

DUO-FLEX
Only Industrial Flashlight with Built-in DUAL LIGHTING SYSTEM!

Flexible Extension Probe Light PIN-POINTS Light Where You Want It

Extends 10½" beyond flashlight—reaches around corners, in deep recesses, through small clearances—gets into all hard-to-get-at dark spots inaccessible with ordinary flashlights. Ideal for close inspection of products and machinery.

No. DF-22
2 CELL
*REG. PAT. U.S. & CAN.

All These Extra Advantages!

Powerful flat focus bulb and reflector throw 1,000 foot beam for long range lighting; red "danger zone" lens ring; heavy-walled plastic case; detachable end cap with spare bulbs and snap-back ring; 3-way safety switch.

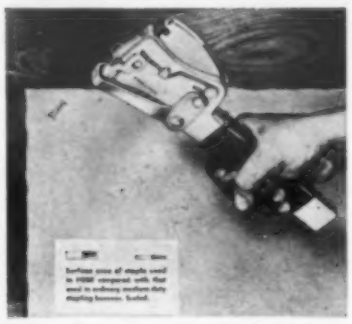
Order Duo-Flex from your local distributor or write for descriptive sheet.

U. S. ELEC. MFG. CORP.
222 West 14th Street, New York 11

USALITE Flashlights and USALITE Leak-Proof Copper-Sealed Batteries

▲ For more details circle NED-41 J3 on enclosed inquiry slip ▲

STAPLING HAMMER
drives large contact-width staple



Driving a double-width staple of 0.102 x 0.030-in. wire with a leg length of ⅜ in., model H2BR stapling hammer is designed for tacking jobs where a larger surface contact is desired. Applying insulation batts and roofing paper and lining freight cars are examples. Increased surface contact helps prevent paper materials from tearing away from the staple. Unit weighs 2 lb 8 oz and holds a strip of approximately 100 staples in its magazine. Made by **Bostitch,** 1010 Mechanic St., Westerly, R. I.

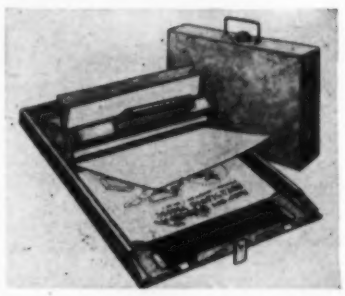
▲ For more details circle NED-42 J3 on enclosed inquiry slip ▲

PORTABLE AIR COMPRESSOR
improved, delivers 3.1 cfm at 40 psi

By incorporating an aluminum connecting rod and redesigning for longer piston stroke, the capacity of the Bearcat portable air compressor has been increased to 3.1 cfm air delivery at 40 psi. A material container can now be used. Other standard features of this direct drive unit include large air intake filter and large capacity oil and air transformer. Made by **Sharpe Mfg. Co.,** 1226-A Wall St., Los Angeles 15, Calif.

▲ For more details circle NED-43 J3 on enclosed inquiry slip ▲

PORTABLE SPIRIT DUPLICATOR
prints in one to five colors



Prints from post-card to legal size can be produced by this portable spirit duplicator in from one to five colors. Actual printing area is 8 x 13½ in. Sheets are roller moistened. Built with self-oiling bronze bearings, duplicator is finished in light gray enamel and weighs approximately 12 lb in its carrying case. Made by **Master Addresser Co.,** 6500E W. Lake St., Minneapolis 16, Minn.

▲ For more details circle NED-44 J3 on enclosed inquiry slip ▲

Count Your Savings!

WITH THIS BIG, EASY-TO-READ

Weight 13¼ lb.

Ohmer INDUSTRIAL COUNTER

You can use this Ohmer double counter to count parts, assemblies or units on conveyor systems . . . to count operations . . . even to count people. Large ⅞" high upper numerals permit supervision from a distance. These upper numerals record up to 999. They can be returned to zero at the end of a shift, run or the completion of a count. The lower figures give a grand total accumulatively up to 99,999 then automatically turn over to zero. Two models (1) lever operated by any reciprocating motion and (2) electric operated from solenoid, push button, treadle, or electric eye. Write for full details, prices.

Register Division
ROCKWELL MANUFACTURING COMPANY
Pittsburgh 8, Pa.

▲ For more details circle NED-45 J3 on enclosed inquiry slip ▲

The **Metals Handbook**

1332 Large pages
1752 Illustrations
1057 Tables
803 Separate articles
1,620,000 Words of text
40,000 Copies in use

Here is a book without a competitor . . . a book 25 years in the making. The current, 7th edition of the Metals Handbook was compiled and written by 68 committees of the American Society for Metals; more than 500 metals engineers were hand picked by the Society as the top experts, the men best qualified to write the most authoritative possible reference book on metals, metal properties, fabrication and uses. The book they wrote is the Metals Handbook. It is divided into 37 principal sections, and contains 803 separate articles and data sheets on metals, metal shaping, forming, heat treating, welding, machining, foundry work, cleaning, finishing, testing, inspection, control and research techniques. All metals, all processes are included. The 64-page index and 4-page section on how to use the book make it easy for any reader to find what he wants. Over 40,000 copies of this edition are now in use by engineers, metallurgists, designers, production men, executives, purchasing agents and others. Order your copy today by returning the coupon below. The price is $15.00.

American Society for Metals, Room 303
7309 Euclid Ave., Cleveland 3, Ohio

Rush me a copy of the Metals Handbook.

Name _____
Company _____
Address _____
City _____ Zone _____ State _____

☐ $15.00 Enclosed ☐ Bill me.

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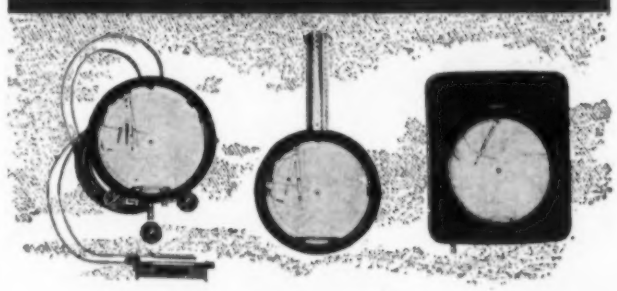
WIDEST RANGE OF EQUIPMENT FOR
HUMIDITY RECORDING



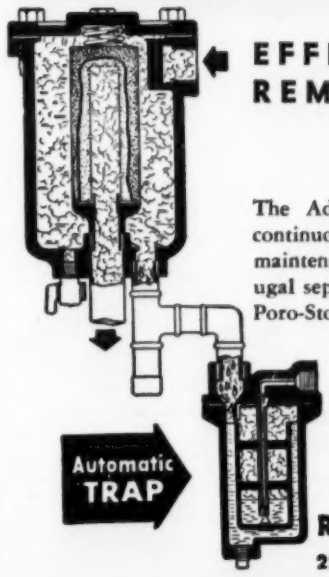
No matter what problems you face in obtaining suitable humidity measurements and records, the unique versatility of Foxboro Humidity Instrumentation offers an appropriate solution. Included are Recorders, Recorder-Controllers, Indicators, for relative humidity (hygroscopic type), wet-and-dry bulb measurements, and for direct reading dewpoint or absolute humidity measurement (with the exclusive Dewcel element). Available in portable, close-coupled and long-distance types; with round or rectangular cases.

Write for full details in Bulletins 188-5 and 407. **The Foxboro Company, 969 Neponset Ave., Foxboro, Mass., U.S.A.**

FOXBORO Reg. U.S. Pat. Off. HUMIDITY INSTRUMENTS

▲ For more details circle NED-47 J3 on enclosed inquiry slip ▲

Poro-Stone Filtration
FOR COMPRESSED AIR



EFFICIENTLY REMOVES:
OIL, WATER
PIPE SCALE

The Adams *Poro-Stone* Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation *plus* diffusion through Poro-Stone, removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 176.

R. P. ADAMS CO., INC.
227 E. Park Dr., Buffalo 17, N. Y.

ADAMS *Poro-Stone* AIR FILTER

▲ For more details circle NED-48 J3 on enclosed inquiry slip ▲

What do you know about the *Moly-sulfide* LUBRICANT?
A LITTLE DOES A LOT

You may have heard about a highly successful solid-film lubricant which is giving remarkable results in the shop and in the field.

In one 40-page booklet we have collected 154 detailed case-histories describing how difficult lubrication problems have been overcome by molybdenum sulfide. If you wish to be up to date about this solid-film lubricant, write for a free copy now.

THE LUBRICANT OF MANY USES

Moly-sulfide
A LITTLE DOES A LOT
SEND FOR THIS FREE BOOKLET TODAY

Climax Molybdenum Company
500 Fifth Avenue · New York City 36 · N.Y.
MSB

▲ For more details circle NED-49 J3 on enclosed inquiry slip ▲

Thousands of tons don't make an ounce of difference to this FLOOR COVERING!

Super-Tough
PABCO MASTIPAVE

Pabco Mastipave withstands the grueling punishment of hand and lift truck traffic in industrial plants. Reduces maintenance costs, extends life of floor. Can be applied over wood and cement surfaces. Specified by cost-conscious industries again and again.

Super-Tough Mastipave can take the daily beating of heavy traffic. America's Number One Floor Covering—*super-tough, non-slip, resilient, low cost.* In rolls or tiles. Terra Cotta and Black.

To find out how Pabco Mastipave can save you money in your plant...

FILL OUT THIS COUPON

PABCO PRODUCTS INC.
New York 16 • Chicago 54 • San Francisco 19
(Mail to Dept. B nearest office)

GENTLEMEN: Without cost or obligation to me, please send your folder, "Every Building needs Pabco MASTIPAVE."

NAME _____
ADDRESS _____
CITY _____ STATE _____

▲ For more details circle NED-50 J3 on enclosed inquiry slip ▲

SOLENOID VALVE for LPG automotive fuel systems

For LPG automotive fuel systems, series V61 stainless steel solenoid valve is of the spring return shut-off type and gives an absolute seal regardless of mounting position. Standard models are the V61-200, rated at 250 psi with 0.136-in. orifice, and the V61-300 rated at 300 psi with 0.125-in. orifice. Both are tapped for ¼ IPS pipe size and are available for 6 or 12 v DC operation. Units can readily be modified to meet special requirements, and are also offered with a built-in check valve to prevent back flow between the two tanks of a double tank system. Made by **Skinner Chuck Co.**, Electric Valve Div., 112 Edgewood Ave., New Britain, Conn.

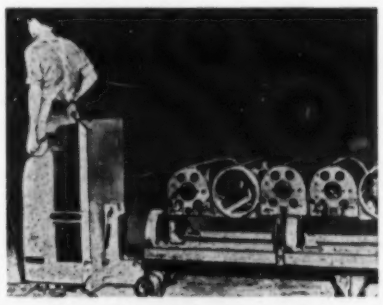
▲ For more details circle NED-51 J3 on enclosed inquiry slip ▲

SMALL FLOW REDUCING VALVES for steam, air, gas, liquid service

Designed for a wide variety of applications, series of small flow bronze or steel reducing valves is offered for steam, air, gas or liquid service. Valves handle inlet pressures to 1000 psi and reduced pressures from 2 to 400 psi. Four sizes from 3/32 to 5/16-in. are made by **Leslie Co.**, 129 Delafield Ave., Lyndhurst, N. J.

▲ For more details circle NED-52 J3 on enclosed inquiry slip ▲

ELECTRIC TRUCK for handling semi-live skids



This rider type electric truck is designed for rapid transport of semi-live skids in congested areas and narrow hand truck aisles. It is capable of handling loads up to 4000 lb at speeds up to 5 mph and can turn in a 40 x 48-in. intersecting aisle with a skid 24 in. wide by 60 in. long. Complete with 400-amp battery, truck weighs less than 1700 lb. Made by **Raymond Corp.**, 41111 Madison St., Greene, N. Y.

▲ For more details circle NED-53 J3 on enclosed inquiry slip ▲

HANDLING BULK MATERIALS?

"TAKE IT UP A FLO→TUBE®"

CANTON STOKERS

The spiral conveyor of steady, dependable service. Sturdy cast iron trough bolts together in 3 ft. sections, capped with steel plates for easy removal if ever necessary. Built to take the abuse of coal, yet with tolerances just right to handle materials from grain size to lump.

To fill 3 or more hoppers use gate-valves in Flo-Tube horizontally. Below, filling 2 hoppers with "Y" chute.

Hopper level maintained by 'off-on' automatic switches.
Exposed end for pick-up

CANTON STOKER CORP.
SPECIALISTS IN AUTOMATIC COAL FIRING, HANDLING AND CONTROL EQUIPMENT
100 ANDREW PLACE S. W. • CANTON, OHIO

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more efficient production . . . greater profit with

Kennett Materials Handling Equipment

Tote boxes made from hard Vulcanized Fibre or "steel-clad" fibre. Weight reduced to a minimum without loss of strength or durability. Made to stack or nest. Inexpensive. Eliminate needless labor costs, increase profits with efficient Kennett Materials Handling Equipment. Trays, trucks, tote boxes in standard sizes or designed to fit your needs. Write today for complete details.

FIBRE SPECIALTY MANUFACTURING CO.
(Div. National Vulcanized Fibre Co.)
P.O. Box 311 Wilmington, Delaware

▲ For more details circle NED-55 J3 on enclosed inquiry slip ▲

TO MAKE AND INSTALL V-BELTS IN MINUTES WITH BRAMMER

You can measure, couple, and install Brammer "V" Link Belting in minutes without dismantling, fuss, or special skill. Slashes down-time. Adjusts simply.

NEW IMPROVED BRAMMER BELTS GIVE YOU THESE NEW ADVANTAGES

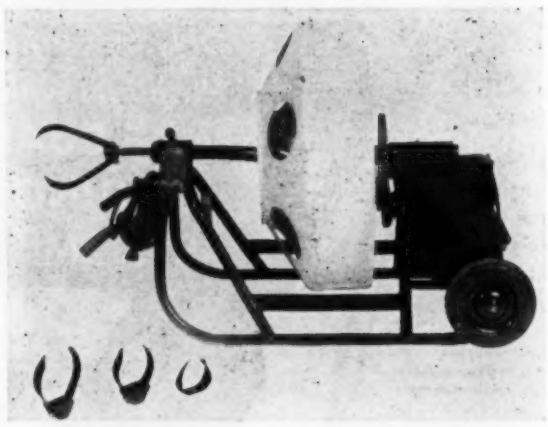
NEW PRE-STRETCHING — NEW BRAMMER TOOL
NEW SIZE-IDENTIFICATION — NEW IMPROVED COMPOUND
NEW PERMALIFE RIVET — NEW GREEN FOR NEOPRENE

WRITE TODAY FOR SAMPLE, CATALOG!

BRAMMER CORPORATION
684 Broadway
New York, N.Y.

▲ For more details circle NED-56 J3 on enclosed inquiry slip ▲

CLEANS SEWERS OR FLUES



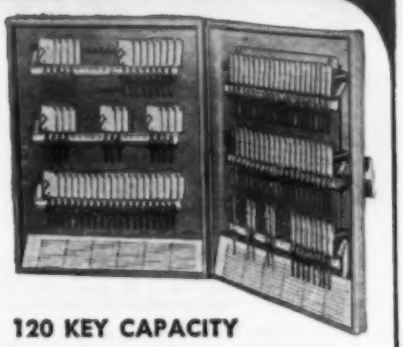
STURDY MOBILE PORTABLE

Drains are unclogged in minutes with Clean-Rite rugged improved drain cleaner. Complete positive chain drive permits machine to rotate in either direction with or without power, giving nonslipping operation. High carbon steel knives clean entire diameter of pipe or flue, compressing to go through small openings yet expanding to fit large diameters. Very essential to your Maintenance Department. Very profitable equipment. A big money saver. The new Clean-Rite was developed in many years in the sewer cleaning business and is designed to do a more thorough job in much less time. Approved and admired by all professional sewer cleaners. You can not buy a better one.

GROVE MACHINE WORKS
208 Grove St., Dept. NED, Bowling Green, Ohio

▲ For more details circle NED-57 J3 on enclosed inquiry slip ▲

STOP
HUNTING FOR KEYS



120 KEY CAPACITY

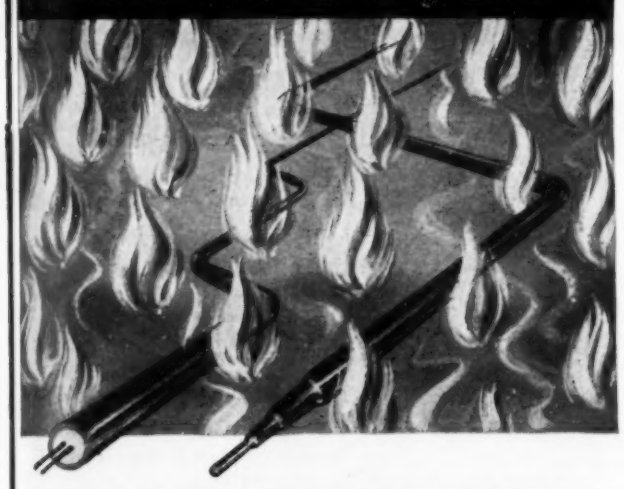
Here's real "key insurance" in a compact KE-CABINET. Made of 20 gauge cold rolled steel with suitable hardware to provide maximum key security. Equipped with numbered KE-TAGS of durable, vulcanized fibre. KE-CABINETS come in two sizes to hold 60 to 120 keys and 100 to 200 keys. The cabinet is finished in modern office grey.

For further information write
CUSHMAN & DENISON MFG. CO.
153 West 23rd St., New York 11, N. Y.

KE-CABINET

For more details circle NED-58 J3 on enclosed inquiry slip

NEW! HEAT-ARMORED ELECTRICAL CONDUCTORS



JET-BORN SHEATHED CABLES NOW AVAILABLE TO INDUSTRY

If you have need for a *better sheathed conductor*—either smaller in diameter, longer in length, or capable of successfully resisting high temperatures (up to 2000° F.) or corrosive gases—this announcement is for *you*.

Originally developed for thermocouple assemblies in jet engines, TK Sheathed Conductors are now being made in diameters ranging from 1/8" to 7/16", in lengths up to 20 feet on the larger sizes and up to 50 feet on the smaller, with such materials as Chromel, Alumel, Iron, Constantan, Copper and Aluminum used for the conductor and any one of *ten* materials for the sheathing.

As you might guess, *most* of these products are *custom-made* to meet the users' requirements. But, many also are practically stock items now. So why not let us know what *your* requirements are? If we don't have *exactly* what you need, we'll promptly tell you what is involved in producing it.

TK FERRO

TUTTLE & KIFT, INC.
A Subsidiary of Ferro Corporation
1820 N. MONITOR AVE. • CHICAGO 39, ILLINOIS

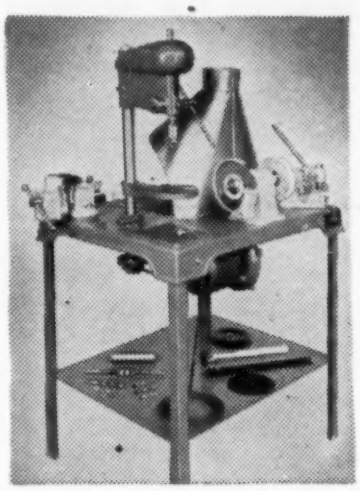
For more details circle NED-59 J3 on enclosed inquiry slip

DRILL GRINDER
bench unit takes 1/8 - 2 1/2 in. drills

Having capacity of 1/8 to 2 1/2-in. drills with two to four lips, bench model DB Sterling drill grinder is powered with a 1/2-hp 110-v motor. Easy to operate because drills are held at proper angle automatically, machine has built-in diamond for dressing the 6 x 1 1/2 x 1/2-in. cup wheel. Made by **McDonough Mfg. Co.**, 1550 Galloway St., Eau Claire, Wis.

For more details circle NED-60 J3 on enclosed inquiry slip

FORGE SHOP KIT
provides essential basic tools



Providing the essential basic tools for forge-shop work, this kit is useful for working iron, sheet metal, aluminum, brass, etc. It consists of forge, vise, drill press, lever shear and a complete set of hand tools. These include hammer, tap wrench, taps and drill bits, cutoff and wire polishing wheels. It is equipped with a 1/3-hp 110-v heavy duty motor with cord, plug and switch. Forge has an electric blower and burns Smith's charcoal. Made by **Champion Blower & Forge Co.**, Lancaster, Pa.

For more details circle NED-61 J3 on enclosed inquiry slip

INSECT DESTROYER
dry type uses pellets

Lindane pellets, placed in the Bug-Git insect destroyer, give off invisible vapors which are harmless to humans but deadly to over 200 varieties of insects. Warm air from a low temperature coil passing through the pellets releases the vapor. One unit is sufficient to exterminate insects in a 15,000-cu ft area. Vaporization is controlled by a fast-acting Micro Switch to 1 gram of lindane per 24 hours. Vapors kill slowly and are odorless, tasteless and have no effect on food and furnishings. Made by **Lindavap Corp.**, Dept. N, Box 638, Ann Arbor, Mich.

For more details circle NED-62 J3 on enclosed inquiry slip

Chicago MOUNTED Wheels

...now even better with **79E BOND**

Buy Chicago Mounted Wheels—bonded with 79E Bond—and you'll never use any other!

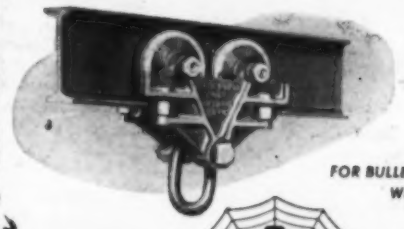
79E—a tough new bond exclusive with Chicago Wheel—is the sensation of the industry . . . it does a BETTER grinding, burring, and finishing job FASTER. A size and shape for every use. Deliveries are excellent—Order today.

CHICAGO WHEEL & *Mfg. Co.*
Dept. NED • 1101 West Monroe Street, Chicago 7

For more details circle NED-63 J3 on enclosed inquiry slip

hand pushed TROLLEYS

Webb Hand Pushed Trolleys are sturdily built for long life and minimum maintenance. Hardened steel wheels equipped with retainer type ball bearings assure long wearing properties and ease of operation. Triple labyrinth seals keep lubricant in and dirt out. Side guide rollers effectively eliminate binding and excessive wear, especially when moving loads around curves. For simple, inexpensive and easy handling of materials, use Webb Hand Pushed Trolleys.



P-2530
4" to 10" I-Beam; 1/2 Ton.

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JERVIS B. WEBB COMPANY
8921 ALPINE AVE. DETROIT 4, MICH.
OFFICES IN PRINCIPAL CITIES
CONVEYOR ENGINEERS AND MANUFACTURERS

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ONE call can answer ALL your gear and sprocket needs!

. . . when you call on the complete UNION GEAR LINES AND SERVICES

Write today for your copy of our catalog

UNION GEARS

Union Gear & Sprocket Corp. 114-120 Purchase St. Boston, Mass.

For more details circle NED-65 J3 on enclosed inquiry slip

IF YOU USE SPECIALTY WIRE

(or are planning to use it)

YOU SHOULD GET THIS NEW BOOKLET!

Here, in one 16-page pocket-size illustrated booklet, you get useful facts on:

- How to get consistent uniformity of wire on every order
- Help on matching wire to your job requirements
- Interesting product problems solved with wire
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Find out how you can solve your production or product performance problems with higher quality Webb CARBON AND STAINLESS NEEDLE WIRE . . . STAINLESS SPRING WIRE . . . HIGH CARBON WIRE . . . SPECIALTY STAINLESS WIRE. Use coupon below.

The Carpenter Steel Company | **Webb Wire Division**
17 Liberty St., New Brunswick, N. J.

MAIL COUPON FOR YOUR FREE BOOKLET

Please send me your booklet, "A Look At Wire Making the Webb Way."

NAME _____ TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ STATE _____

For more details circle NED-66 J3 on enclosed inquiry slip

Wear a DUPOR No. 10 Chemical Cartridge Respirator

Code "A" Cartridges (Soda Lime)—White Plastic for light concentrations of inorganic acid gases.

Code "B" Cartridges (Activated Charcoal)—Black plastic for light concentrations of organic chemical vapors.

Code "AB" Cartridges (Soda Lime and Activated Charcoal)—Yellow plastic for light concentrations of combined inorganic and organic gases.

Unit has DUPOR "controlled-breathing" valves. Double filter apertures hold 50cc. capacity chemical cartridges. Soft rubber face mask gives gas-tight fit on any shape face, as well as panorama view with no blind spots. Chemical filters are packed in colored plastic cartridges that will not corrode like metal ones or crush like paper types. Unit is shipped with code "B" cartridge unless otherwise specified.

Sample sent

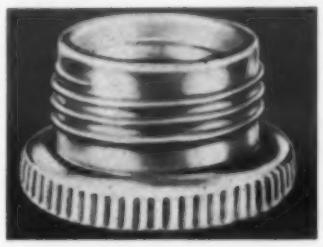
$5.00 pp

Extra Cartridges 70c a set

H. S. COVER, South Bend, Ind.

For more details circle NED-67 J3 on enclosed inquiry slip

TUBE FITTING CLOSURES protect threads and exclude dirt

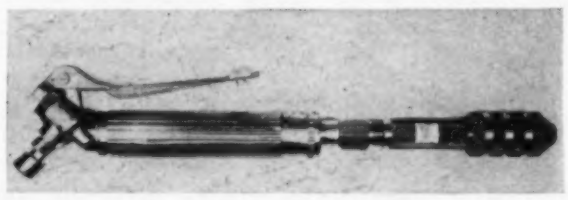


Specifically designed for use with Weatherhead Ermetto ERA aircraft type tubing fittings, these metal closures are available in sizes 3 through 24. They protect threads, seal out dust and moisture or seal fluid as required during shipping, manufacture and storage. They spin on to the fixtures by hand. Made by **Tubing Seal Cap, Inc.**, 808 W. Santa Anita, San Gabriel, Calif.

For more details circle NED-70 J3 on enclosed inquiry slip

POWDER LANCE for difficult piercing operations

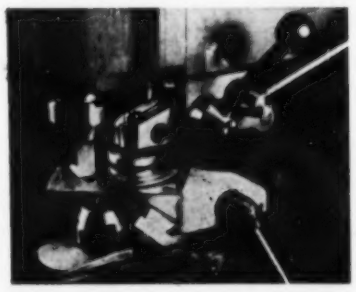
Introduction of metallic powder into the oxygen stream of the Oxweld ACL-1 Powder Lance produces an exothermic reaction hot enough to pierce holes



in many materials that resist the standard oxygen lance. Materials which can be pierced include blast furnace salamanders, concrete, fire brick, aluminum billets, steel and cast iron. Oxygen and powder are automatically mixed. Any standard lance pipe, in single or multiple lengths, can be used with the lance. One lever controls flow of both materials. Made by **Linde Air Products Co.**, Room 308-NED, 30 E. 42nd St., New York 17, N. Y.

For more details circle NED-71 J3 on enclosed inquiry slip

RUBBER CENTERS facilitate metal disk cutting



Used with Pullmax sheet and plate working machines, rubber centers facilitate cutting of disks from stainless and brass where no center point mark is permitted or plating operations must follow. Centers that hold the metal are actuated by regular quick-locking centering tools and turn smoothly while metal is being cut. Pullmax machines work mild steel from 16-gage up to 11/32-in. and do straight, circle and irregular cutting as well as beading, joggling, dishing and louvering. Made by **American Pullmax Co.**, 2457 N. Sheffield Ave., Chicago 14, Ill.

For more details circle NED-72 J3 on enclosed inquiry slip

ONE Man LOADS and TRIMS Box Cars

40 to 60 T. P. H.

S-A SWIVELOADER

Saves time, money and labor. Powerful centrifugal thrower loads dry granular material up to 2" size into far corners of box cars. *Operator stays safely outside car.* May also be used for storage bins or piles. *Mail coupon for Bulletin 1046.*

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Standard Products Division
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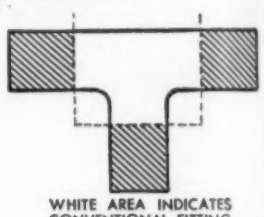
Please send me Bulletin 1046 on S-A SWIVELOADERS.
Name.....
Company.....
Address.....
City.....Zone....State.....

For more details circle NED-74 J3 on enclosed inquiry slip

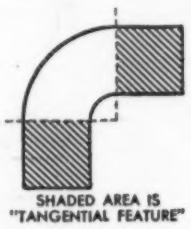
How the *Speedline* "TANGENTIAL FEATURE" cuts stainless piping costs

Now you can save up to 50% on corrosion-resistant lines by using light wall stainless pipe and versatile *Speedline* Fittings.



WHITE AREA INDICATES CONVENTIONAL FITTING

The added straight section of corrosion-resistant *Speedline* Fittings permits attaching unions or flanges without fouling... reduces number of welds required... simplifies installation... eliminates angle joints.



SHADED AREA IS "TANGENTIAL FEATURE"

SEND FOR LATEST INFORMATION

Write a note on your company letterhead to get the complete story on the many cost-saving advantages of the *Speedline* System for process piping.

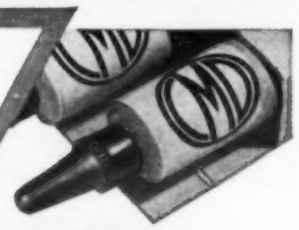
***Speedline* distributors are located in principal cities from coast to coast**

HORACE T. POTTS CO. *Since 1815*

532 E. Erie Avenue, Philadelphia 34, Pa.

For more details circle NED-75 J3 on enclosed inquiry slip

read what users say about CMD anti-scoring lubricant



Among technical men all over the country, CMD has become the standard for extreme pressure, anti-scoring lubrication. These men have found that they can get more efficient lubrication for a longer time... ...and get longer life out of their equipment too. People who have used and tested CMD are your best proof of its reliability.

"We have been using your Anti-Scoring Center Point Lubricant on all ejector, return and guide pins: and we highly recommend this lubricant to anyone having trouble with scored and broken pins of this type on die cast dies." *Die Manufacturer*

"We have tried out your CMD Anti-Scoring lubricants in both grease and oil in comparison with another brand claiming to be the world's best, for the purpose. We are happy to report that we have found your product superior in remaining in its protective position under sustained heavy loads for the longest periods of time of any material we have tried for this purpose." *Engineering Consultant*

"Some time ago you very kindly sent to us some samples of your CMD Center Point Lubricants. These have been carefully tested in a number of applications besides the lubricating of centers, and we are pleased to say that the results have been very satisfactory even in cases where other well known high pressure lubricants have failed in a very short time." *University Dept. of Physics*

Sample Kit Available for Your Trial

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1902 West 46th Street, Chicago 9, Illinois

For more details circle NED-68 J3 on enclosed inquiry slip

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overhead cable costing only $3800.00

SAVES $7000.00 ANNUALLY at Honeywell

Vertical curve of Universal Cable Conveyor inclines to convenient work height, utilizes overhead space.

A BUSCHMAN OVERHEAD CABLE CONVEYOR SYSTEM replaces former manual handling method at MINNEAPOLIS-HONEYWELL REGULATOR CO. with resulting savings of $7000.00 annually on an investment of $3800.00. This does not include recovered floor space, reduced aisle traffic, easier working conditions and increased production. It is anticipated that the overall total savings that will be realized by Minneapolis-Honeywell improved production methods in this instance is approximately $16,000.00 per year.

Why not investigate the possibilities of similar savings in your plant operations?

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Representatives in Principal Cities

PRODUCE MORE ... FOR LESS
Buschman Conveyors

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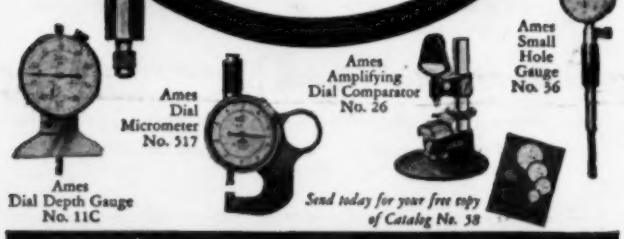
AMES

...the preferred Dial Indicators

One of America's largest and most famous mass-producers recently chose Ames as preferred source of supply for indicator gauges. They did because the four sizes of Ames "Hundred Series" indicators fit every measuring requirement; they are *accurate, sensitive,* low in friction, yet are *rugged* and *tough* —give *more* on-the-job time. All Ames products embody latest design and highest-quality materials; they are manufactured by methods and machines that are *exclusive* with B. C. Ames Co.



Ames Dial Depth Gauge No. 11C

Ames Dial Micrometer No. 517

Ames Amplifying Dial Comparator No. 26

Ames Small Hole Gauge No. 56

Send today for your free copy of Catalog No. 58

Representatives in principal cities **B. C. AMES CO.** *34 Ames Street Waltham 54, Mass.*

Mfgr. of Micrometer Dial Gauges • Micrometer Dial Indicators

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• AMERICA'S FIRST WIRE FENCE •

Could you **blame** yourself if failure to safeguard property resulted in loss? After all, isn't property protection a responsibility of all management? Security is a job for Page Chain Link Fence, available in heavily galvanized Copper-Bearing Steel, rust-immune Stainless Steel or corrosion-resisting Aluminum. But PAGE means more than a quality product. It is a complete fence service, performed by more than 100 firms having technical training and fence erecting know-how, and conveniently located throughout the country. For illustrated data and name of firm nearest you—

***Write** to PAGE FENCE ASSOCIATION in Monessen, Pa., Atlanta, Bridgeport, Chicago, Denver, Detroit, Los Angeles, Philadelphia, New York or San Francisco.*

PRODUCT OF PAGE STEEL & WIRE DIVISION OF AMERICAN CHAIN & CABLE COMPANY, INC.

For more details circle NED-76 J3 on enclosed inquiry slip

S-A Car Pullers

Save Time Cut Costs

If you have your own switch track, you can profitably use an S-A Car Puller. No need to use a gang of men or wait for a switch engine. *One man can shift or spot up to six loaded cars under normal conditions.* Powerful capstan will also pull or lift other heavy loads at 45 feet per minute. *Mail coupon for Bulletin 1339.*

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Company.....
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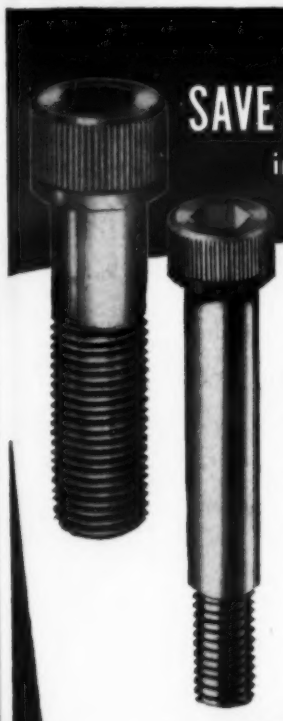
For more details circle NED-77 J3 on enclosed inquiry slip

See How To
SAVE TIME AND SPACE
in Die Assembly



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CAP SCREWS AND STRIPPER BOLTS

Easy-to-grip knurled socket head permits quick finger driving with minimum wrench tightening. Key-type socket facilitates quick "drawing-up" in awkward locations and allows more compact assembly. Precision machined . . . high-grade alloy steel . . . heat treated for optimum hardness and strength.

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For more details circle NED-78 J3 on enclosed inquiry slip

TOOL of a THOUSAND USES

TRI-SAW, All-Purpose, Portable Power Hacksaw

Still the same low price. ONLY $37.50

Makes Any Cutting Job Quick . . . Easy . . . Economical

Simply attach Tri-Saw to any 1/4" or 5/16" heavy duty drill—then zip through wood, sheet metal, heavy metal, nails, pipe and what have you, in seconds! Use this sensational time and work saving tool and you'll say it's the best all-purpose saw on the market. Only Tri-Saw gives you these exceptional features:

- No side torque or spin
- One shot lubrication
- Completely replaceable high speed bearings
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- Needs no starting hole

See Tri-Saw at your jobber or write us for descriptive literature

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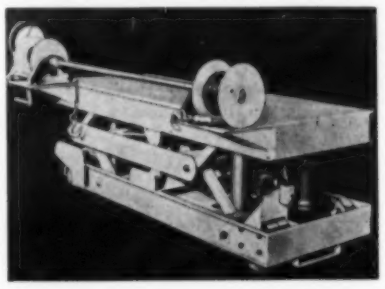
For more details circle NED-79 J3 on enclosed inquiry slip

HEATING ELEMENTS
in lengths from 1 in. to 12 ft.

Available in lengths from 1 in. to 12 ft and in 3/8 through 3/4-in. diameters, Thermacartridge electric heating elements give high watt densities and long life. Applications include use in injection molding machines and heating forms for shell molding. Units are fabricated with close tolerance OD, facilitating the "reamed-hole" installation technique. Made by **Thermel, Inc.**, 3444 W. Lake St., Chicago 24, Ill.

For more details circle NED-80 J3 on enclosed inquiry slip

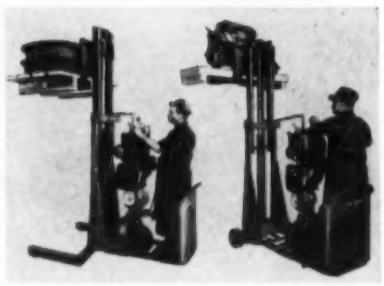
ELEVATING TABLE WINCH
attachment facilitates die handling



For mounting on Raymond sheet feeding tables, this winch and cable arrangement permits use of table as a die changing device. Winch has a 96 to 1 gear reduction, and dies weighing up to 5 tons can be handled. Two reels, each holding 15 ft of cable, are mounted at ends of table and connected by a shaft. A straight pull is made when removing dies, or the cable can be run around suitable pulleys for returning die to press. Full table working surface is retained for sheet feeding. Made by **Raymond Corp.**, 41111 Madison St., Greene, N. Y.

For more details circle NED-81 J3 on enclosed inquiry slip

HIGH LIFT TRUCKS
load capacities of 1500 and 2000 lb



Lightweight high-lift trucks D-15 and DS-20, with load capacities of 1500 and 2000 lb, respectively, offer low load limits on floors with high lifts. Standard model D-15 has an 84-in. lift based on 15-in. load centers. It is counterweighted, and weighs 1700 lb approximately. With operator and full load, its weight is under 3500 lb. Model DS-20 utilizes outriggers to maintain balance. Units are powered by an air-cooled gasoline engine and have pneumatic tired drive wheel and rubber tired load wheels with 360 degree steering. Made by **Knickerbocker Co.**, Truck-Man Div., 627 Liberty St., Jackson, Mich.

For more details circle NED-82 J3 on enclosed inquiry slip

get the facts

32 informative pages on

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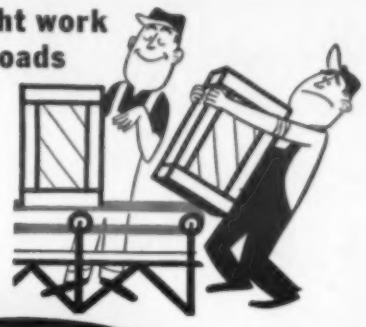
For more details circle NED-83 J3 on enclosed inquiry slip

Makes light work of heavy loads



Quaker

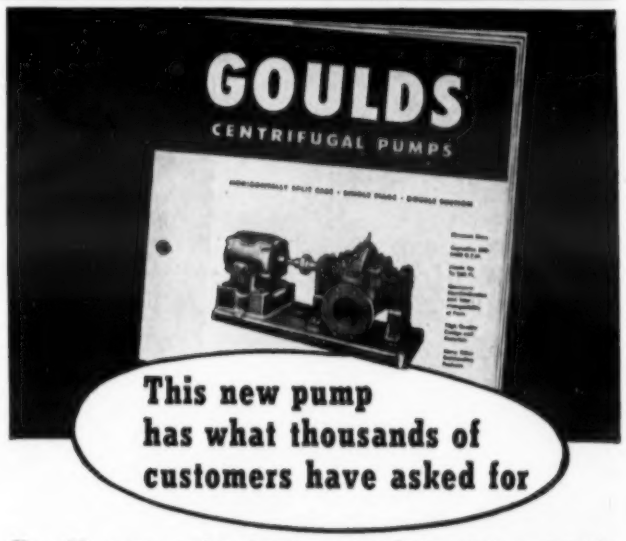
CONVEYOR BELTING

Takes shock loads! Withstands tension! That's Quaker Conveyor Belting for uninterrupted materials handling, when selected for the service required. Tough, non-slip rubber encloses uniformly tensioned plies of highest quality duck, friction impregnated. Whatever the job, Quaker is tops for the work intended. For superior service, maximum economy, buy Quaker quality.

Write for name of nearest Quaker distributor

QUAKER RUBBER CORPORATION
DIVISION OF H. K. PORTER COMPANY, INC.
OF PITTSBURGH
Dept. D, Philadelphia 24, Pa.
Branches in Principal Cities

For more details circle NED-84 J3 on enclosed inquiry slip



This new pump has what thousands of customers have asked for

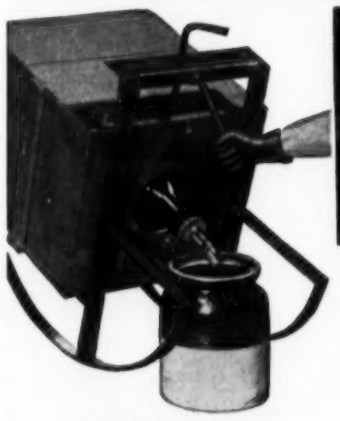
For 50 years we've been learning from our industrial customers what they want in centrifugal pumps.

We've come as close as modern design and materials allow to putting what you want into the Fig. 3405 pump.

The 12-page illustrated bulletin No. 721.6 covers every detail of this pump—general description, specifications, mechanical data, parts interchangeability table, performance curves, dimensions. We think you'll agree that here's a pump with everything for long, satisfactory service. Write today for Bulletin 721.6. GOULDS PUMPS, Inc., Dept. NED, Seneca Falls, N. Y.

Goulds PUMPS INC. Seneca Falls New York

For more details circle NED-85 J3 on enclosed inquiry slip



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POUR SAFER

SIMPLE . . .
DIRECT . . .
QUICK . . .

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Rugged steel tilter, easily clamped on carboy in upright position provides controlled flow. No spilling, splashing waste or damage.
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POURING SPOUT
Acid resistant, vented spout assures smooth flow up to 5 gpm. Fits all carboys.
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BOTH FOR ONLY $25.00

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SAFETY EQUIPMENT FOR EVERY HAZARD

For more details circle NED-86 J3 on enclosed inquiry slip

METZGAR "NYLO-ROLL" CONVEYORS

Resist CORROSION

LACTIC ACID
FOOD ACIDS
MILD INDUSTRIAL ACIDS
BRINE, SALT
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NYLON BEARINGS ON STAINLESS STEEL AXLES

Gravity, or Live Roller Models. 11½"; 15"; 18"; 24" widths.

Recommended where wet, alkali, salt, or mild acid conditions rapidly destroy ordinary ball bearings.

For full information Describe your needs

METZGAR CO. METZGAR CONVEYORS

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GRAND RAPIDS 4, MICH.

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How to run high-voltage power close to the load in dusty, dirty or lint-laden areas

Get all the electrical advantages of short secondary lines plus the maintenance advantages of dry-type transformers, even in areas where air-borne dust, dirt or lint is a problem.

The new, totally-enclosed, Westinghouse Type "E" Transformer makes it possible.

Write for Booklet B-5812; then check with your local contractor, Westinghouse distributor or application engineer. Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa. J-70705

YOU CAN BE SURE... IF IT'S Westinghouse

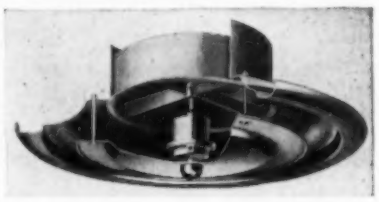
For more details circle NED-88 J3 on enclosed inquiry slip

FIRST AID KIT is waterproof and airtight

Maximum protection for the articles in the Utility first aid kit is provided by the clear heavy gage Vinylite plastic container with a Flextite extruded plastic slide closure, latter made by Flexigrip, Inc. Kit is waterproof and airtight, in addition is lightweight. Closure resists oil, grease, strains and abrasion. Contents include antiseptics, burn ointments, cotton, gauze and gauze pads, adhesive tape and Band Aid adhesive bandages. Available from **Johnson & Johnson,** New Brunswick, N. J.

For more details circle NED-89 J3 on enclosed inquiry slip

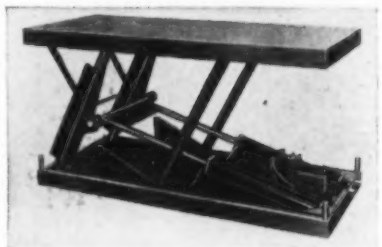
AIR DIFFUSER is thermostat-controlled



Pneumatic motor incorporated in the Kno-Draft ceiling duffuser for air conditioning systems is remotely controlled by a thermostat. Movement of the damper and hence air volume adapts the unit to systems serving zones having variable heat loads. Air quantity alone is changed, not air pattern or effective area of duffusion. Made by **Connor Engineering Corp.,** 114 Shelter Rock Lane, Danbury, Conn.

For more details circle NED-90 J3 on enclosed inquiry slip

HYDRAULIC LIFT TABLE with 4000 and 10,000-lb capacities



In standard models of 4000 and 10,000-lb capacities, hydraulic lift table measures 12½ in. from the floor in lowered position and gives a full lift of 30½ in. The pump can be arranged on an outside platform to give an absolute minimum height of 9 in., in which case usable lift is approximately 34 in. Control of the 1½ or 2-hp motors is by foot levers, although remote push-button control can also be furnished. Other accessories include retractable rear wheels and a front pry bar type wheel. Applications include sheet feeding in the steel, paper, lumber and automotive industries. Made by **Beacon Machinery, Inc.,** Dept. A, P. O. Box 188, East St. Louis, Ill.

For more details circle NED-91 J3 on enclosed inquiry slip

CASTINGS on the lighter side by WELLMAN

If you're thinking along the lighter side about the whole subject of magnesium and aluminum castings, think about Wellman as a source.

Let us show you how our four complete plants and almost a half century of experience can help you. Write for our new catalog No. 53.

Well-Cast MAGNESIUM AND ALUMINUM CASTINGS
Well-Made WOOD AND METAL PATTERNS

THE WELLMAN BRONZE & ALUMINUM CO.
Dept. 15, 12800 Shaker Boulevard Cleveland 20, Ohio

For more details circle NED-92 J3 on enclosed inquiry slip

HOMER PERMANENT non-electric MAGNETIC DRUMS and DUCTS for AUTOMATIC REMOVAL of TRAMP METALS

HOMER Magnetic Ducts for the removal of tramp iron from Air or Gravity conveyed Grains, Textile and Chemical materials, etc. These units are used with almost any type of processing machinery.

HOMER Magnetic Drums for removal of tramp iron from fine or pulverized dry products, as, Foods, Chemicals, Plastics, Paint Pigments, etc. These units can be used with chutes, hoppers, screw or belt conveying machinery.

Pat. Pending

Send for detailed information.

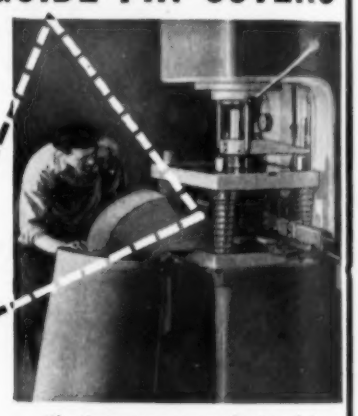
The HOMER MANUFACTURING CO., Inc.
Dept. 1-25 LIMA, OHIO

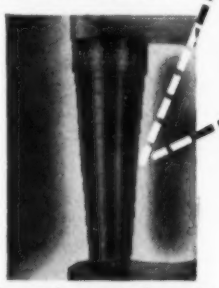
Producers of Magnetic Separator Equipment Since 1923

For more details circle NED-93 J3 on enclosed inquiry slip

DIE LIFE INCREASED 25% with ELASTICONE® GUIDE PIN COVERS

Get increased performance from Dies with Elasticone Guide Pin Covers. Protects pins and bushings from nicks and scratches . . . preserves Dies' accurate alignment . . . reduces lubrication and maintenance. JUST SNAP INTO PLACE! *No Installation Costs!*





Investigate today the many new cost-saving engineering advantages in die designing with Elasticones.

Elasticones are manufactured in stock sizes. Specify O.D. of bushing and full open height of set when ordering.

Write for full information and literature.

CENTRAL
2208 EAST HUNTINGDON ST. PHILA. 25, PA.

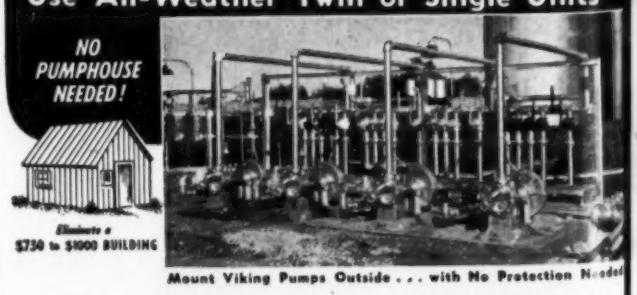
CENTRAL SAFETY EQUIPMENT COMPANY

For more details circle NED-94 J3 on enclosed inquiry slip

SAVE with VIKING PUMPS

Use All-Weather Twin or Single Units

NO PUMPHOUSE NEEDED!



Eliminate a $750 to $1000 BUILDING

Mount Viking Pumps Outside . . . with No Protection Needed

Either winter or summer, no protection is needed for Viking all-weather single or twin units.

Made for pumping all types of petroleum and chemical products from the very lightest to the most viscous.

Out door units add safety to the pumping job as well. No fumes to collect.

Neater and handier to use. No cramped quarters creating hazardous and unsightly conditions. Makes possible easier and less costly piping arrangements.

In every way you save with Viking All-Weather pumps.

Ask for bulletins B400G & SP223CG today.

VIKING AN HONORED NAME IN PUMPING

VIKING PUMP COMPANY CEDAR FALLS, IOWA

For more details circle NED-95 J3 on enclosed inquiry slip

WINNEN INCINERATOR

Pays for Itself In Less Than a Year! —Burns Wet or Dry Refuse

The Winnen Industrial Incinerator saves more than its costs in refuse hauling charges within six to twelve months, according to hundreds of satisfied users. Largest model completely consumes up to 400 lbs. per hour of half wet and half dry refuse. Available in four different sizes. Combustion is so complete there is usually less than a bushel of fine, white ash after a week of normal operation.

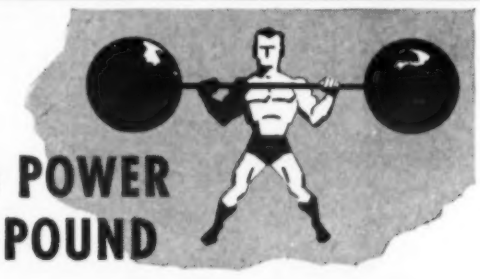
Ideal for use in or near residential areas, practically all smoke and odors can be eliminated through forced draft, a special ventilating system and secondary combustion. A hot, intense flame is delivered by twin burners using natural, manufactured, bottled gas or oil. Operating costs are amazingly low. Available without any burners for dry refuse, only.

Designed for installation either indoors or out. Absolutely safe! It is easily loaded and fired and can be left unattended during day or night. Virtually foolproof, the Winnen Incinerator comes completely equipped with the latest safety devices. Available with automatic timer to control fuel shut-off at pre-selected times, as well as prefab chimney, if required. Also special drying rack where large amounts of garbage or wet refuse must be burned.

Winnen Incinerators are shipped complete, knocked down, direct from factory within ten days of receipt of order. Complete, easy-to-follow instructions for assembling and installing are furnished. Any qualified maintenance man can have a Winnen Incinerator ready to operate within a day or less. Installation does not require a mason or furnace man. Materials and workmanship are fully guaranteed for 90 days.

Send for new, free folder, prices and further information. Use the inquiry card or write to Winnen Incinerator Co., 932 Broadway N. E., Bedford 90, Ohio. —*Advt.*

For more details circle **NED-96 J3** on enclosed inquiry slip



more POWER per POUND in DAVID ROUND WINCHES

Where space available is small and the load-handling job is heavy, good service can be had from installation of a compact, all-steel, spur-geared DR Winch. With capacities up to 5 tons, these rugged hand powered or electric winches are adaptable to countless heavy-duty lifting and pulling operations. Sold through established distributors everywhere. For information write David Round & Son, Box 883, Cleveland 22, Ohio.

No. 99 Capacity 5 tons

No. 102, Motorized Capacity 5 tons

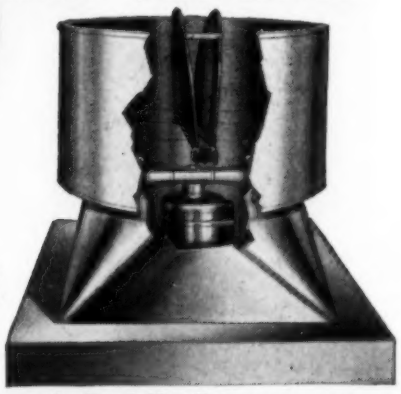
Manufacturers of CHAIN HOISTS • ELECTRIC HOISTS • I-BEAM TROLLEYS • CRANES • WINCHES

David Round DR DAVID ROUND HOISTS & CRANES

For more details circle **NED-97 J3** on enclosed inquiry slip

Automatic ROOF VENTILATOR

AIR



Furnished as standard with curb base as illustrated.

Industrial Air Automatic Roof Ventilators are provided with counter balanced damper flaps which open when the fan is started, and close when the fan is stopped, sealing off the discharge stack and preventing any down drafts or loss of heat.

The vertical discharge insures the immediate dispersal of the exhaust air well above the building level and prevents the re-entry of exhaust fumes through adjacent windows or supply ducts.

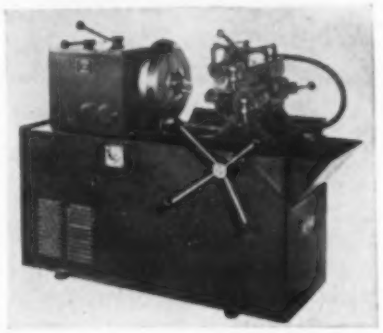
Represented in all principal cities
Write Dept. 501 for complete catalog

THE HARVEY P. BERTRAM CO.
561-565 READING ROAD - CINCINNATI 2, OHIO

For more details circle **NED-98 J3** on enclosed inquiry slip

PIPE THREADING MACHINE

chuck jaw size rapidly changed for pipes in 1 to 4-in. range



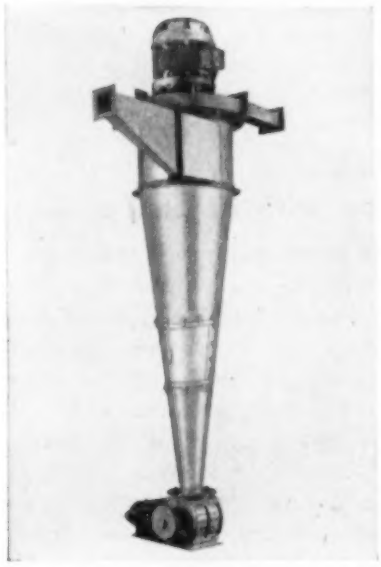
Front chuck of the No. 784 "Thrift Model" heavy duty floor type pipe threading machine requires no wrench for operation. It is practical for frequent changes of pipe sizes, since spin of hand wheel rapidly moves gripping jaws through entire range of 1 to 4 in. An extra range of ½ and ¾ in. is incorporated. Rear chuck with long spindle gives ample pipe support and assures straight threads on long lengths. Magnetic starter with push-pull selector switch for run and jog controls heavy duty, 1800-rpm, 3-hp motor.

Four spindle speeds are controlled by conveniently located levers. Two quick-opening detachable lever operated die-heads cover entire pipe and bolt range and are adjustable for over or under size threads. Dies are hobbed type made of tool steel and thread full length and taper American National Standard threads. Dies for standard length and taper API threads and bolt threads are available also. Made by **Oster Mfg. Co.**, 2066 E. 61st Place, Cleveland 3, O.

For more details circle **NED-99 J3** on enclosed inquiry slip

PNEUMATIC CONVEYOR

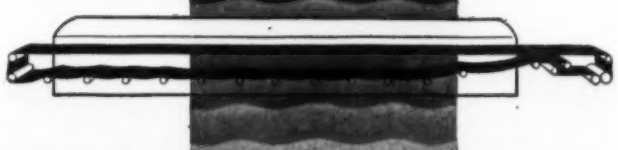
for handling bulk materials



A negative pressure or draw-through unit, the Pneu-Vac pneumatic conveying system for bulk materials is built in 12 standard sizes with fan motors from 2 to 60 hp. Capacity with granular products is up to 50 tons per hour and more in multiple systems. Pipe runs can be 300 ft and more. Fan is mounted on the top of a long-cone collector and a rotary vane feeder valve at the base completes the compact unit. Material being conveyed does not pass through the fan of the self-cleaning system. A multitube filter collects all visible dust. Made by **Sprout, Waldron & Co.**, 8 Logan St., Muncy, Pa.

For more details circle **NED-100 J3** on enclosed inquiry slip

hitch your HEAT to a WISSCO STEEL PROCESSING BELT



Turn your products out faster, more economically in continuous straight-line production with a Wissco Belt. To order, write or call our nearest sales office.

THE COLORADO FUEL AND IRON CORPORATION—Denver, Colorado
PACIFIC COAST DIVISION—Oakland, California
WICKWIRE SPENCER STEEL DIVISION—Atlanta, Boston, Buffalo, Chicago, Detroit, New Orleans, New York, Philadelphia

1430

WISSCO BELTS
PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION CF&I

For more details circle **NED-101 J3** on enclosed inquiry slip

with AURAND CLEANING TOOLS

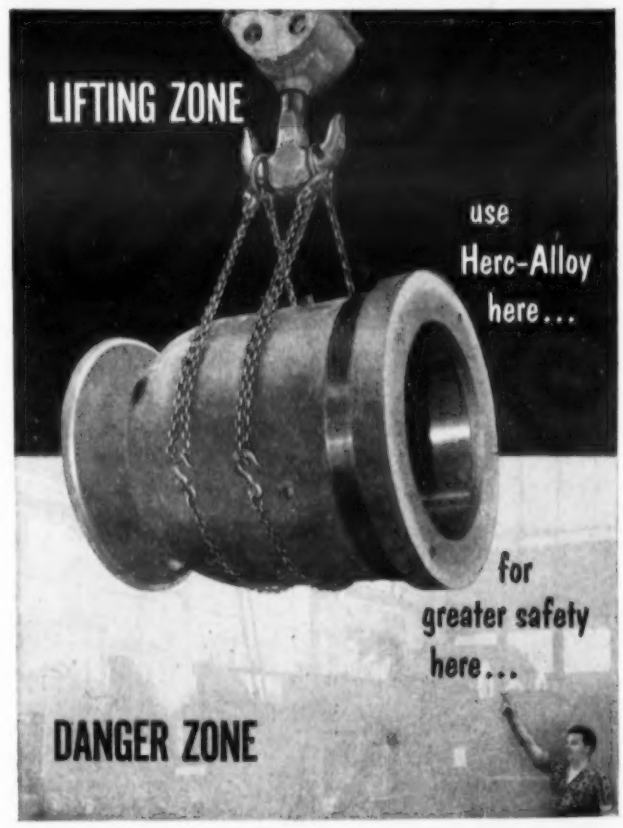
Clean off accumulations of scale, paint, rust or any foreign matter from any hard surface with Aurand Cleaning Tools. Toothed cutting wheels, loose pinioned on rotating head chip away accumulations at high speed. Positive depth shoe prevents cutting into permanent surface and assures uniform cleaning of entire area.

Two sizes in electric or pneumatic models.

For full details, write Dept. 14

AURAND MFG. & EQUIP. CO.
2643 Colerain Avenue • CINCINNATI, OHIO

For more details circle **NED-102 J3** on enclosed inquiry slip



SPECIFY HERC-ALLOY SLING CHAINS

Write for Data Book

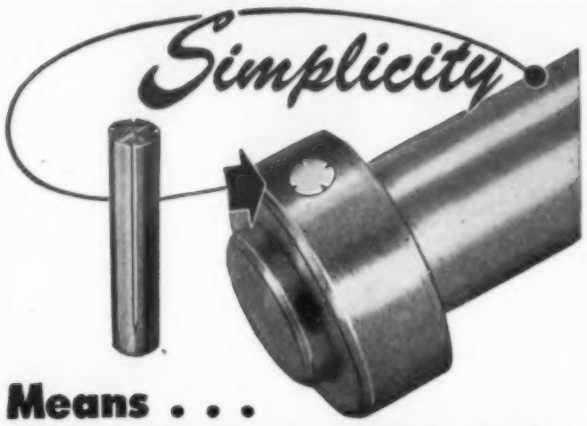
Hundreds of plants like the one shown above* are using Herc-Alloy Sling Chains. Greater safety is their big reason for doing it. But there are other factors too. Herc-Alloy is economical because of its long service life. Then too, the use of alloy steel permits a weight reduction that helps prevent worker fatigue. These advantages are worth thinking about. Those who do consider them seriously generally adopt safe Herc-Alloy Sling Chains for their plants.

HERC-ALLOY Sling Chains are made-up to order, are individually tested, registered and guaranteed.

*LAKE ERIE ENGINEERING CORPORATION — MANUFACTURER OF HYDRAULIC PRESSES

CM HOISTS AND CHAIN **COLUMBUS McKINNON CHAIN CORPORATION**
TONAWANDA, NEW YORK
DISTRICT OFFICES: NEW YORK, CHICAGO, CLEVELAND

For more details circle **NED-103 J3** on enclosed inquiry slip



Means . . .

PRODUCTION ECONOMY

Assembly of parts like this with DRIV-LOK Pins is simple—fast—more economical. Just drill through collar and shaft and drive in the pin. No reaming or staking necessary. Vibration proof. DRIV-LOK Pins are used in many industries for countless applications. Made in many types and sizes to fit your needs. Write for CATALOG showing sizes and applications.

DRIV-LOK PIN COMPANY
715 Chauncey Street, Sycamore, Illinois

For more details circle NED-104 J3 on enclosed inquiry slip

NEW RYNEL POWER TRANSMISSION

DESIGN ENGINEERING SERVICE

GEARMOTORS

SPEED REDUCERS

with High Overhung Load Capacities

Rynel Speed Reducers and Gearmotors are offered in a range from 1/50 to 5 H.P. and 1" to 8" centers, with any desired ratios practical in this range.

Clean-swept modern design, plus gearing built to produce exact rated efficiency makes these Rynel reduction units highly desirable for all critical operating conditions.

DESIGNERS AND SUPPLIERS

Right Angle
Double Reduction
Parallel Shaft
Shaft Mounted
Speed Reducers
and
Gearmotors

CALL A RYNEL ENGINEER — *He Will Visit You the Same Day You Call.*

WRITE FOR A COPY of Complete Bulletin on Sizes and Types of RYNEL Reduction Units

Ask For Bulletin

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312 Miller Street, Sterling, Illinois • 4730 N. Western Avenue, Chicago, Illinois

SPUR · HELICAL · WORM · WORM GEAR · INTERNAL · SEGMENT · RATCHET · STRAIGHT BEVEL GEARS

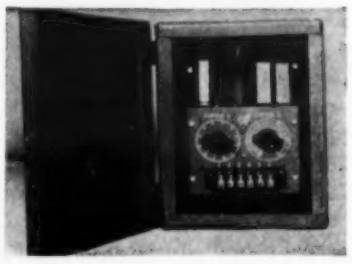
For more details circle NED-105 J3 on enclosed inquiry slip

V-BELT REPAIR KIT
for all FHP and most multiple belts

By using this emergency kit, it is possible to replace broken v-belts without dismantling the machinery. Each kit contains a planned footage of detachable v-link belting, a simplified tool for attaching and an instruction folder. Four units are available, with various belting sizes, and will replace all FPH and most multiple v-belts. Made by **Brammer Corp.**, Dept. NED, 684 Broadway, New York 12, N. Y.

For more details circle NED-106 J3 on enclosed inquiry slip

ELECTRONIC TIMER
intervals are 1/10 to 60 seconds



Providing timed delay periods, intervals or other programming between 1/10 and 60 seconds, type 60MC electronic timer can be operated from momentary or sustained contact such as foot switch, push button or pressure switch. Intervals are unaffected by variation in line voltage or frequency. Unit is enclosed in a gray wrinkle finish steel box, measuring 9 x 7 x 4 in., with hinged cover and knockouts. Applications include incorporation for control in bag and bottle filling, ceramic and injection molding, hydraulic presses, rubber curing and spot welding. Made by **G. C. Wilson & Co.**, Dept. NED, 2 N. Passaic Ave., Chatham, N. J.

For more details circle NED-107 J3 on enclosed inquiry slip

MOLDING PRESSES
hydraulic type with heated platens

For small mechanical rubber and plastic molding shops, four-post hydraulic presses feature electrically heated platens thermostatically controlled up to 450° F. Units are available in 10, 20 and 30-ton capacities to accommodate platen sizes of 6 x 6, 8 x 8 and 12 x 12-in. respectively. Operation may be by an existing central hydraulic system or by hand pump. Press cylinders are built for service up to 3000 psi. Made by **M & N Hydraulic Press Co.**, 780 Route 3, Allwood, Clifton, N. J.

For more details circle NED-108 J3 on enclosed inquiry slip

MAXAW 800
magic • pivot does it!

HEAVY DUTY—ALL BALL AND ROLLER BEARING—INDUSTRIAL QUALITY

$89.50

Out-performs saws selling up to $145!

Here's the saw that bears down with that *extra cushion* of power and sings through the tougher cutting jobs in maintenance and industrial sawing. Cuts full 2-in. rough or semi-dressed lumber *with blade to spare*—2¾" on a straight cut, and 2 9/32" on a 45° bevel. **magic • pivot** does it!

And **magic • pivot** cuts down saw weight . . . MAXAW 800 weighs only 14 lbs.—⅓ less than conventional 8-in. saws . . . puts less handicap on men and muscles. Get all the facts—do more—save more—with **magic • pivot** MAXAW 800!

Free Pamphlet! — Find out what **magic • pivot** can do for you. Send for Pamphlet N-93.

Cummins-Chicago Corp.
DIVISIONS
Cummins INDUSTRIALS • Cummins Portable Tools
4740 N. Ravenswood Ave. • Chicago 40, Illinois
IN CANADA: 334 Laudor Ave. Toronto

For more details circle NED-109 J3 on enclosed inquiry slip

Small precision metal parts... Torrington makes them better, and for less!

FREE CATALOG — shows the great variety of small parts we can produce inexpensively and promptly. Send for copy today!

If your product uses small precision metal parts . . . pivots, pins, dowels, rollers, mandrels, needles, punches, etc. . . . send us your blueprints for a prompt quotation.

As a leading contract fabricator, TORRINGTON is equipped with the special machinery to produce in any quantity for quick delivery at low prices.

THE TORRINGTON COMPANY
Specialties Division
420 Field Street • Torrington, Conn.

Makers of
TORRINGTON NEEDLE BEARINGS

For more details circle NED-110 J3 on enclosed inquiry slip

New Universal Radial Hole-Drilling Machine

A Standard Machine Designed for Variety Production

Why build a special machine for drilling radial holes when a standard machine equipped with Govro-Nelson Automatic Drilling Units will, in many cases, perform the work of a special machine that would cost considerably more!

Any number of drilling units up to eight may be employed, the units being movable not only through 360 degrees on the circular table but also movable endwise on riser plates.

The machine may also be used for tapping operations with Govro-Nelson Tapping Units. It has a range of 1/32" to 3/8" on drilling operations and 0.80 to ⅜-16 on tapping operations, depending on material and spindle speeds. Literature on request.

GOVRO-NELSON CO.
1933 Antoinette
DETROIT 8, MICH.

***Automatic* DRILLING UNIT**

For more details circle NED-111 J3 on enclosed inquiry slip

When you need SMALL SPACE RELAYS...

Comar can supply the correct relay to suit your specific needs. Type N with dimensions of only 2⅛" x 1⅞" x 1⅝" for 4PDT, and Type D with 1¾" x 1 17/32" x 1 5/32" for 4PST, are ideal for a wide range of general industrial purposes. Contacts up to 10 amperes available. For military and general industrial applications, the Type TM which is only 1⅜" x 1½" x 31/32" for 4PDT, or Type TJ which is only 1⅞" x 1½" x 31/32" for 4PDT, or Type TW which is only 1 11/32" x 1⅞" x ⅜" for DPDT, have provided the solution to small space problems. Standard units carry up to 3 amperes on contacts. Types TM, TJ and TW available hermetically sealed or open. Relays can be modified to meet special requirements. Write!

Comar ELECTRIC COMPANY

Send for Catalog

- RELAYS
- SOLENOIDS
- COILS
- TRANSFORMERS
- SWITCHES
- HERMETIC SEALING

3349 Addison St., Chicago 18

For more details circle NED-112 J3 on enclosed inquiry slip

SEAL OF PROVEN PERFORMANCE

Modernair

AIR / FLUID POWER EQUIPMENT SPECIALISTS

VALVES – CHUCKS – CYLINDERS – SILENCERS – SOLENOIDS
HYDRAULIC PUMPS – COMPRESSORS – PILOTS – AIR CONTROLS
MACHINE FEEDS – CLAMP CYLINDERS – QUICK EXHAUSTS
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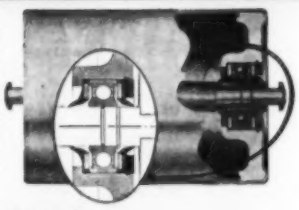
STOCKS IN PRINCIPAL CITIES

Modernair CORPORATION
400 PREDA STREET • SAN LEANDRO, CALIFORNIA

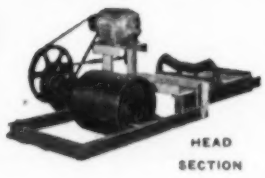
For more details circle NED-113 J3 on enclosed inquiry slip

IMPROVED HEAVY-DUTY
TRAN-SEAL IDLER

A service-proven *heavy-duty* belt conveyor idler. Need for re-lubrication is "designed-out" by improved bearing seals working together with specially designed bearings cavity closures. Keeps lubricant in, and foreign material out.



for TRANSALL
TYPE C BELT CONVEYORS

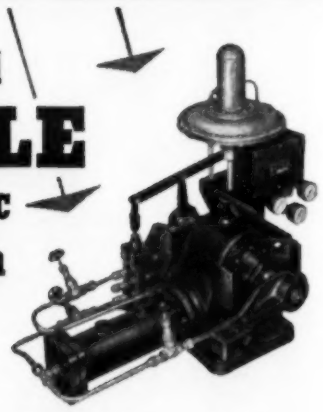


Use pre-fabricated, pre-engineered Head and Tail Sections and variable number Intermediate Sections for easy, quick assembly to fit your needs. Easy to lengthen. Write TRANSALL, Inc., 120 N. 11th, Birmingham 4, Alabama

TRANSALL SECTIONAL BELT CONVEYOR SYSTEMS

For more details circle NED-114 J3 on enclosed inquiry slip

How to add
MUSCLE
to a Pneumatic
Control System



Askania Pneu-Draulic Crank Cylinder gives a pneumatic control system the muscle it needs to operate large valves or dampers.

It transforms the 3-15 p.s.i. signal from a pneumatic controller into high-torque hydraulic power for positive, fast, precise positioning of butterfly valves, plug valves, or other control elements.

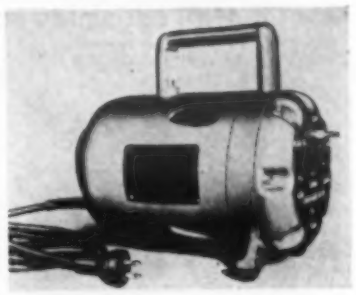
The Askania Pneu-Draulic Crank Cylinder is compact. Takes up less room than other types of equipment. Moreover, hydraulic operation is inexpensive.

This is one of several Askania units designed to add muscle to pneumatic control systems. Form 1-87 describes the Pneu-Draulic Crank Cylinder; Form 1-86 describes the Pneu-Draulic Slide Valve Positioner. Ask for both papers.

ASKANIA REGULATOR COMPANY
258 E. Ontario Street Chicago 10, Illinois
Subsidiary of General Precision Equipment Corp.

For more details circle NED-115 J3 on enclosed inquiry slip

TACHOMETER TESTER
has seven output speed shafts



Most types of portable tachometers can be tested by the model 1100 tachometer tester which has seven output speed shafts of 300, 500, 600, 720, 800, 1000 and 1800 rpm. Built-in reversing switch permits clockwise or counterclockwise rotation of shafts. Synchronous motor makes unit as accurate as an electric clock. Portable unit weighs 23 lb and operates on 115 v 60 cycles. Made by **B. K. Sweeney Mfg. Co.,** Dept. 13, 1601 23rd St., Denver 17, Colo.

For more details circle NED-116 J3 on enclosed inquiry slip

WELDING GENERATORS
three models have new features

Three new features are provided in the redesigned 200, 300 and 400-amp dc generator welders. Convenient current control is made possible by setting the electrode selector to size of electrode to be used, then turning the calibrated current dial to desired heat. Reversing switch gives quick change of polarity. A magnetic motor starter is wired across-the-line and is operated by pushbutton on the control box. It incorporates automatic-reset thermal overload relays as a safety provision. Made by **Metal & Thermit Corp.,** 401 E. 41st St., New York 17, N. Y.

For more details circle NED-117 J3 on enclosed inquiry slip

TAPE MOISTENING MACHINE
feeds, moistens, measures, cuts off

Strong, safe taping of cartons for heavy duty shipping is assured by The Senior 3-in. automatic tape moistening machine. Unit features floating automatic spring pressure control weight over brushes that gives uniform end-to-end moistening. It automatically feeds, moistens, measures, cuts off and delivers desired lengths in one operation. Machine has two-brush tape moisture control and water level control. Made by **Lipton Mfg. Co.,** 54 W. Houston St., New York 11, N. Y.

For more details circle NED-118 J3 on enclosed inquiry slip

CONTROL PAINT OVERSPRAY
. . . In a big way!

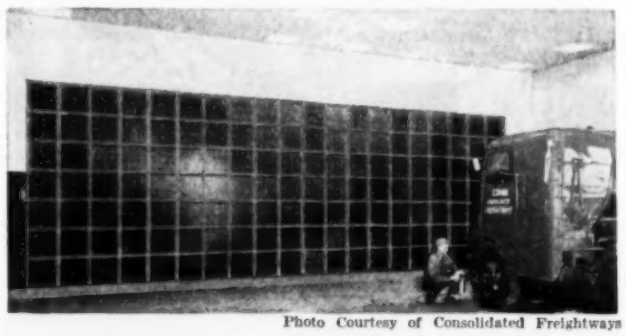


Photo Courtesy of Consolidated Freightways

R P Paint Arrestors Provide Effective Control of Large Volume Overspray . . . at Low Cost!

This user eliminated paint overspray problems in the most effective, most economical way possible . . . with R P Paint Arrestors! This new, better method is inexpensive to install and maintain, saving in floor space, flexible in application. Check today, on the R P way to modern overspray removal.

WRITE FOR FREE BOOKLET
Helpful, informative suggestions to solve your paint spray booth problems. Write today.

RESEARCH PRODUCTS CORPORATION
Dept. 32 Madison 10, Wis.

RP . . . PRODUCTS OF RESEARCH

For more details circle NED-119 J3 on enclosed inquiry slip

Close-Up Look Tells Why... THE NEW 12" SWING
LOGAN LATHE
DELIVERS PLUS PERFORMANCE

For Production, Maintenance, Tool Room or School Shop

Rigid HEADSTOCK
Massively proportioned spindle for extreme rigidity on heavy cuts. Oversize ball bearing mounting for sustained accuracy.

Massive CARRIAGE
Large dials have widely separated graduations for accurate reading. Precision ground surfaces on cross slide and saddle permit mounting fixtures and use of magnetic indicators. Extra wide and long bearing surface. Convenient, lever-operated, disc type clutch. Heavy compound for rigidity.

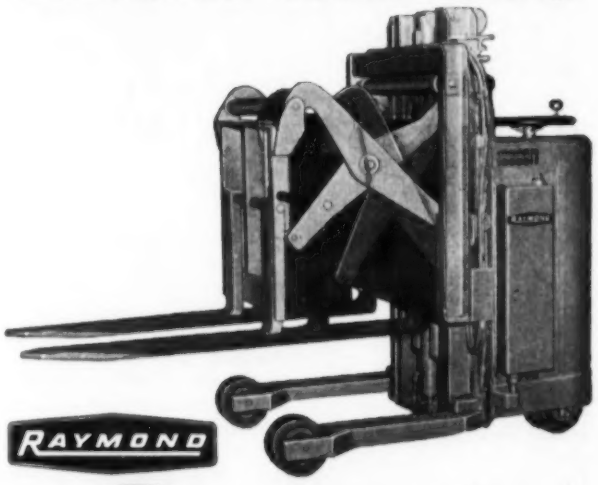
The closer you inspect this new 12" swing Logan Lathe, the *better* it looks. The advanced design of individual parts, and the precision construction throughout become more evident. Its 35" center distance, 1⅝" spindle hole, 1" collet capacity, and rugged, massive proportions mean extra capacity, stability and power. Keep this newest Logan in mind as you make plans for your production line, tool room, shop, or student training program.

Brief Specifications
Swing over bed and saddle wings, 12"... Center Distances, 23" and 35"... Turret Lathes Models have 43" bed length ... 1⅝" spindle hole ... 1" collet capacity ... 16 spindle speeds, 38 to 1260 rpm.

Get full facts from your Logan Dealer, or WRITE
LOGAN ENGINEERING CO., Lawrence and Lamon Ave., Chicago 30, Ill.

For more details circle NED-120 J3 on enclosed inquiry slip

This is it...
The truck with the
"BOARDING HOUSE REACH"



RAYMOND
Reach-Fork*
TRADE MARK

Imagine it . . . a truck that permits close-quarter operation in every warehouse in America! Only the RAYMOND Reach-Fork performs this space-making miracle. Because only the Reach-Fork has "boarding-house reach." It's another great truck from the firm that 3 years ago made 6-ft. aisles a reality!

FORKS REACH RIGHT OUT to pick up or deposit your load . . . extend 24" and back in seconds. No need to change your existing rack set-up.

HANDLES ANY SIZE PALLET . . . one truck handles pallets of any size without any changes in the truck.

STACKS PALLETS CLOSELY . . . ideal for loading and unloading motor trucks and boxcars, or for rack storage use.

TIERS FROM 6-FT. AISLES in any warehouse thanks to Reach-Forks, short length and patented** off-set drive wheel with 200° turning arc.

DOUBLES YOUR STORAGE by trimming 4 to 6 ft. off conventional tiering truck aisles.

*PATENT PENDING **PATENT NO. 2,564,002

MAIL THIS COUPON Learn how RAYMOND's Reach-Fork can produce dollar-and-space savings right in your own warehouse!

The RAYMOND CORPORATION
4120 Madison St., Greene, N.Y.

Please send me Bulletin describing your new Reach-Fork Electric Tiering Truck.

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

For more details circle NED-121 J3 on enclosed inquiry slip

LINEMASTER puts feet to work when hands are busy! Compact switch operates with light pressure from foot—or knee, if mounted on bench or side of wall. Increases production by allowing full use of both hands. Prevents accidents to fingers. Sturdy cast iron housing, black crackle enamel finish. LINEMASTER offers low first cost, and years of trouble-free operation.

WRITE FOR BULLETIN AND PRICES

Let us quote on your special switch requirements

LINEMASTER SWITCH CORP. 424 WOODSTOCK TERRACE WOODSTOCK, CONN.

For more details circle NED-123 J3 on enclosed inquiry slip

ULTRASONIC CUTTER
applicable to working hardened metal, ceramics and precious stones

Ultrasonic sound waves are employed to drive cutting tools in this machine to carve shapes, drill holes and perform other operations on such materials as hardened metal, steel, ceramics, glass and even precious stones. Similar in appearance to a drill press, machine is now being varied to enable it to perform functions of a lathe, milling machine, boring mill, shaper, saw and router.

Relatively soft cutting tool travels only a few thousandths of an inch at a speed so high that its motion is imperceptible. In operation, work is clamped firmly in place, and the tool is lowered until it contacts the work. Liquid abrasive is flowed over the surface in a continuous stream and the power is turned on. Tool vibrates at approximately 27,000 cycles per second and drives the abrasive particles at ultrasonic speeds. The action of these particles striking the work under tremendous acceleration cuts even the hardest of materials.

Accuracies of high order are obtained, tolerances being limited only by the accuracy of the die being used, the dimensions of the shaped tool and the accuracy of the feed and ways of the machine. Developed by **Raytheon Mfg. Co.**, Dept. 6470-NR, Waltham 54, Mass.

For more details circle NED-126 J3 on enclosed inquiry slip

JOHNSON BAND SAW

MODEL J
10" x 18" Capacity

It's BIG, It's RUGGED
It's Made Right
AND THE PRICE IS
SURPRISINGLY LOW
WRITE FOR DETAILS

JOHNSON MANUFACTURING CORP.
ALBION, MICHIGAN

For more details circle NED-129 J3 on enclosed inquiry slip

SEL-LOK SPRING PINS won't vibrate loose

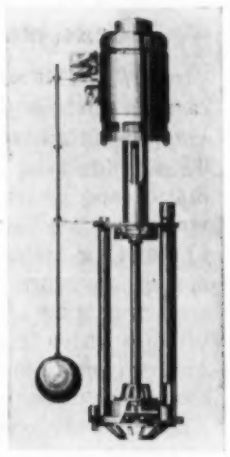
Use them as hinge pins, use them to fasten gears, pulleys and sheaves to steel shafting, use them to replace keys, keyways and cotter pins—they won't work loose. For complete information, write STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

Sel-lok spring pins are shock resistant and vibration proof • eliminate expensive reaming operations • replace tapered or grooved pins • easy to insert and remove • reusable • accurate in diameter and length • reduce installation costs • lighter in weight and as strong as a solid cold-rolled steel pin of the same diameter • available in a full range of lengths and diameters

SEL-LOK SPRING PIN DIVISION sps JENKINTOWN PENNSYLVANIA

For more details circle NED-124 J3 on enclosed inquiry slip

ACIDPROOF SUMP PUMP
heads to 35 ft, flows to 75 gpm



Completely rubber lined and covered, 1½-in. acidproof sump pump is of overhung suspended shaft design to eliminate submersion of bearings and packings. It handles acid sludges, corrosives and foamy products with solids in suspension at heads up to 35 ft and flows up to 75 gpm. It will empty tanks to within 2½ in. of the bottom. Illustration shows the acidproof float switch which can be fitted if desired to control delivery at any sump level. Neoprene and special rubber coverings are available for unusual applications. Made by **Galigher Co.**, 547 W. Eighth South St., Salt Lake City 4, Utah.

For more details circle NED-127 J3 on enclosed inquiry slip

5 REASONS WHY BLAW-KNOX ELECTROFORGED® GRATING IS YOUR BEST BUY

- STRENGTH
- SAFETY
- LOW UPKEEP
- LONG LIFE
- SELF-CLEANING

We factory-fit this one-piece Open Steel Flooring to your dimensions for easy installation. You can cover dangerous open areas and add useful space inside and out.

USE COUPON FOR DETAILS AND PRICES

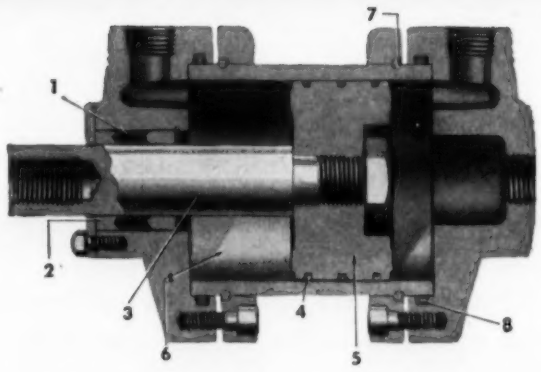
BLAW-KNOX COMPANY
GRATING DEPARTMENT
BLAW-KNOX EQUIPMENT DIVISION
P.O. Box 2068, Pittsburgh, Pa.

Please send prices on____sq. ft. Grating as per specifications marked at right.
Please send prices on___Type___Stair Treads___inches wide.
COMPANY_____
INDIVIDUAL_____
STREET_____
CITY_____ZONE_____STATE_____

BLAW-KNOX ELECTROFORGED STEEL GRATING

For more details circle NED-125 J3 on enclosed inquiry slip

Hydraulic Cylinders



1. Self-adjusting rod packing.
2. Ample bronze rod guide.
3. Over-size, ground and polished alloy piston rod.
4. Closely-fitted step-seal-cut piston rings.
5. Heavy duty alloy cast pistons with large bearing surfaces.
6. Seamless drawn steel tubing, precision honed.
7. Keeper rings eliminate tie rods. Permit rotation of covers to convenient pipe locations.
8. "O" ring seals eliminate gaskets. Assure leak-proof operation.

Available in 300 P. S. I. and 1500 P. S. I. 3000 P. S. I. furnished. 7 mountings; 10 bores; strokes to 96"; standard or 2:1 over-size rod; cushioning. Send for Cat. 105.

RIVETT LATHE & GRINDER INC.
Brighton 35, Boston, Mass., Dept. NED-9

For more details circle NED-128 J3 on enclosed inquiry slip

AUTOMATIC SCRAP REMOVAL ON ANY MACHINE TOOL WITH CHIP-TOTE

The May-Fran Chip-Tote continuously removes turnings, borings and chips from operating machine tools. This unit eliminates machine down-time for manual scrap removal . . . assures continuous full-production operation of machine tool . . . gets rid of uncontained scrap around machine which cuts floor and tires.

Chip-Totes can be installed as part of the original equipment or they can be incorporated as an integral operating unit on almost any machine tool currently in use.

The Chip-Tote utilizes May-Fran Hinged-Steel Conveyor Belting which is perforated to permit coolant drainage. Width, length and angle of incline can be modified to meet specific requirements. Speed of operation can be synchronized with the metal-removing capacity and rate of coolant flow of machine to which Chip-Tote is attached.

Let a Chip-Tote solve your production problems... automatically and efficiently.

Write today for Chip-Tote catalog.

Designers, Builders of Handling Systems 1408-MF

MAY-FRAN ENGINEERING, INC.
1711 CLARKSTONE ROAD • CLEVELAND 12, OHIO

For more details circle NED-130 J3 on enclosed inquiry slip

the answer to small hand hole problems!

IDEAL

Series 900

Tube Expanders

. . . for Rolling and Flaring Tubes in Super-Heater Units. Series 900 NOW made for tubes as small as 15/16" inside diameter.

Expander, Mandrel and Joint in one compact unit, assures easy entry and withdrawal.

Series 940

See Your Dealer, or Write Us Today!

THE GUSTAV WIEDEKE COMPANY
DAYTON 1, OHIO

For more details circle NED-131 J3 on enclosed inquiry slip

Hear Here!

Loudness Reduced 50%* Inside a BURGESS-MANNING ACOUSTI-BOOTH

In the hushed interior of this roomy, airy acousti-booth you hear easily while telephoning. Walls of thick, sound absorbing material, and patented construction reduce the loudness of noise by 50%.

When you invest in a Burgess-Manning Acousti-Booth you are purchasing better communications . . . good hearing means fewer errors.

Model 211 Floor Booth

* Based on studies by a prominent research organization.
Write for Bulletin A-107

BURGESS-MANNING COMPANY
Architectural Products Division
5970-C Northwest Highway, Chicago 31, Illinois

For more details circle NED-132 J3 on enclosed inquiry slip

New, Larger COVER GOGGLES
fit over ALL modern glasses . . .

New CESCO series 548 and 549 Cover Goggles are 20% larger than former cover goggles. Contoured edges with wide surfaces eliminate pressure on nose, seal out flying particles or light flashes. Standard 50 mm lenses are quickly changed from front. Both chippers and welders models are well ventilated to reduce fogging. Simplified bridge adjustment. 3 headbands.

See or write your CESCO safety equipment distributor for full details

Features
- Lightweight sturdy plastic, contoured edges
- Ventilated lenses with baffled air flow
- Sideshields— Baffled for welding Perforated for chipping or grinding

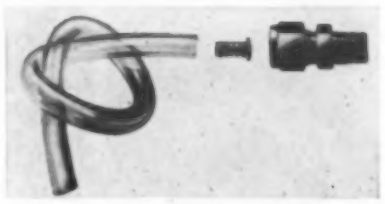
CHICAGO EYE SHIELD COMPANY • 2322 Warren Blvd. • Chicago 12, Ill.

CESCO FOR SAFETY

OFFICES IN: Atlanta, Birmingham, Boston, Buffalo, Cincinnati, Cleveland, Columbus, Detroit, East Orange, Houston, Kansas City, Knoxville, Little Rock, Los Angeles, Mexico City, D. F., Milwaukee, Montreal, Philadelphia, Pittsburgh, Salt Lake City, San Francisco, Spokane, St. Louis, St. Paul, Toledo, Tulsa

For more details circle NED-133 J3 on enclosed inquiry slip

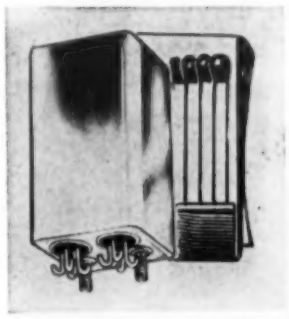
PLASTIC TUBE FITTINGS
prevent cold flow in plastic tube



Now available in any metal, Swagelock plastic tube fittings and inserts are designed to furnish a positive seal and fast assembly. Inserts prevent cold flow in the tubing and support its inside dimension, providing the backing strength required by the insert. The insert is slipped into the end of the tube, and the fitting then pushed on and tightened 1¼ turns to complete the assembly. Inserts are available from 3/16-in. OD and up. Made by **Crawford Fitting Co.**, 886 E. 140th St., Cleveland 10, O.

For more details circle NED-134 J3 on enclosed inquiry slip

MINIATURE RELAYS
sensitive to low input



Suitable for commercial and military applications is this line of miniature relays, series 100-105-106, which measures 1 x 1 x 1¾ in. They are sensitive to low input, are hermetically sealed with headers for solder connections and have high shock immunity. Series is available either single-pole double-throw or double-pole, double-throw. Silver contacts are rated 2 amp at 28 v dc resistive. Made by **Signal Engineering & Mfg. Co.**, Dept. NED, 154 W. Fourteenth St., New York 11, N. Y.

For more details circle NED-135 J3 on enclosed inquiry slip

SHEET STORAGE RACK
vertical design has 2500-lb capacity

For either temporary or permanent storage applications, this Sheet Handler takes up a minimum of floorspace and supports any kind of sheet including metal, glass, plywood and plastic. Sheets are easy to separate and handle because of the convenient vertical design, which also permits additional space savings by back-to-back mounting if desired. Units are of arc welded steel construction, weigh 11 lb and have a capacity of 2500 lb. Made by **Western Mfg. Co.**, Dept. D, Arkansas City, Kans.

For more details circle NED-136 J3 on enclosed inquiry slip

drills 6 inches of concrete per minute

. . . gives lowest cost per foot of concrete drilled with a

tilden
ROTARY
KONKRETE KORE DRILL

Patented core slot expels cuttings automatically

U. S. Pat. No. Re. 23539

Drill straight, clean, ready-to-use holes at speeds up to 6 inches per minute—even through steel reinforced concrete. TILDEN Rotary Koncrete Kore Drills can be used with ordinary electric or rotary air drill. Free Factory sharpening and repair service still available on all Standard TILDEN Drills from 3/16" to 8-inch diameters. Interchangeable shanks for any depth hole.

WRITE TODAY for free, illustrated catalog.

SOLD BY SUPPLY HOUSES EVERYWHERE

TILDEN TOOL Manufacturing Company
209 Los Molinos • San Clemente, Calif.
Branch: 7111 North Glenwood, Chicago 26, Illinois

For more details circle NED-137 J3 on enclosed inquiry slip

UNBREAKABLE PLAXPAK® CARBOY

- Meets ICC-1-F specifications.
- Unbreakable, even at sub-zero temperatures.
- Lower shipping costs; simplifies handling.

SAFETY!

Plaxpak polyethylene carboys are blow-molded in one piece and are inert to most chemicals. Unbreakable and light in weight, they simplify handling, shipping and storage of acids and other chemicals.

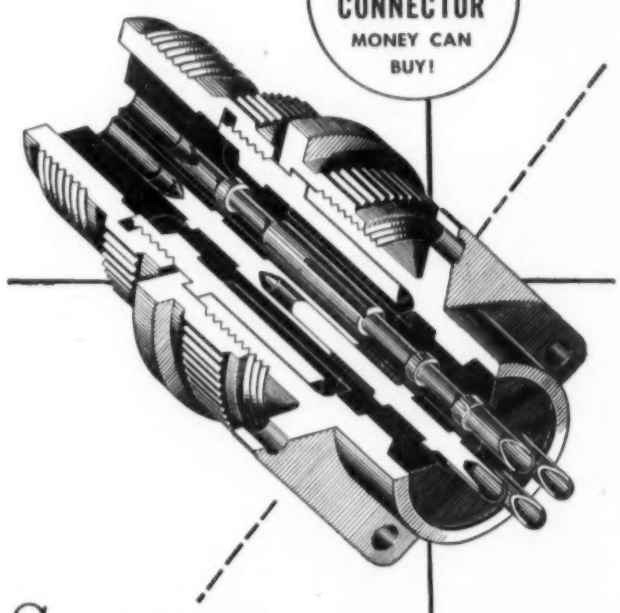
Write for complete details.

PLAX CORPORATION
WEST HARTFORD, CONNECTICUT
District Sales Offices: New York, Philadelphia, Chicago and other principal cities.
In Canada: Plax Canada, Limited, Toronto

PLAX

For more details circle NED-138 J3 on enclosed inquiry slip

The Finest ELECTRICAL CONNECTOR MONEY CAN BUY!



SCINFLEX ASSURES LOW MAINTENANCE BECAUSE IT PERMITS SIMPLICITY

When operating conditions demand an electrical connector that will stand up under the most rugged requirements, always choose Bendix Scinflex Electrical Connectors. The insert material, an exclusive Bendix development, is one of our contributions to the electrical connector industry. The dielectric strength remains well above requirements within the temperature range of −67°F to +275°F. It makes possible a design increasing resistance to flashover and creepage. It withstands maximum conditions of current and voltage without breakdown. But that is only part of the story. It's also the reason why they are vibration-proof and moisture-proof. So, naturally, it pays to specify Bendix Scinflex Connectors and get this extra protection. Our sales department will be glad to furnish complete information on request.

• Moisture-Proof • Radio Quiet • Single Piece Inserts • Vibration-Proof • Light Weight • High Insulation Resistance • High Resistance to Fuels and Oils • Fungus Resistant • Easy Assembly and Disassembly • Fewer Parts than any other Connector • No additional solder required.

BENDIX SCINFLEX
ELECTRICAL CONNECTORS

Bendix

SCINTILLA MAGNETO DIVISION of
SIDNEY, NEW YORK

Bendix AVIATION CORPORATION

Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.

FACTORY BRANCH OFFICES: 118 E. Providencia Ave., Burbank, Calif. • Stephenson Bldg., 6560 Cass Ave., Detroit 2, Michigan • Brouwer Bldg., 176 W. Wisconsin Avenue, Milwaukee, Wisconsin • 582 Market Street, San Francisco 4, California

For more details circle NED-139 J3 on enclosed inquiry slip

Solder faster, better...

WASSCO GLO-MELT RESISTANCE SOLDERING

for complete details WRITE

PLIERS HANDPIECE for "sweat" soldering joints in copper tubing, piping and large electrical terminals. It is used with the basic GLO-MELT Power Unit where ground connections are inconvenient or where heat of two carbons is required. Sturdy, lightweight — made of aluminum and tough fibre. Ideal tool for plumbers, refrigeration and motor repair shops!

Basic GLO-MELT Power Unit is rated at 450 Watts. 24 separate heats. Uses 115 V. 60 cycle power source.

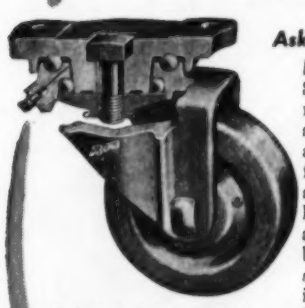
Panel Accessory for production line soldering of small parts held across the gap of 2 carbon tips.

A Complete Line of Soldering Accessories Available

WASSERLEIN MFG. CO. INC.
126 W. CASS ST. • JOLIET, ILLINOIS
In Canada: 50 St. Clair Ave. W., Toronto

For more details circle NED-140 J3 on enclosed inquiry slip

This Bond® 36-A Caster is Your Best Buy for DEPENDABLE SERVICE



C-136-A Series—Double Ball Race Swivel Caster equipped with Roller Bearing Celoron Wheels.

Ask your industrial distributor...

he knows that Bond 36-A Series Casters fit most service requirements. These universally used, completely dependable casters incorporate a fork, base and king bolt construction that distributes the load *evenly*. Two ball races of almost equal diameter, set one below the other, permit *easy swiveling*. All moving parts in the ball race are pressure lubricated.

Remember, *your best buy is Bond*—and your distributor will be glad to help you select the right Bond casters for your jobs. Ask your distributor for a copy of the Bond Catalog K-38 or write direct.

Bond 1-A Series Stationary Truck Casters give dependable service as companion casters to the Bond 36-A Series Casters.

BOND FOUNDRY & MACHINE CO.
Manheim, Penna.

For more details circle NED-141 J3 on enclosed inquiry slip

SPRAY NOZZLES

...FOR LOWER COST

Spray Nozzles alone can often materially reduce spraying costs. Spraying Systems Co. has proved this again and again. Write for Catalogs 22 and 23 . . . and see for yourself.

CLIP AND MAIL

SPRAYING SYSTEMS CO.
3211 Randolph Street • Bellwood, Illinois

☐ Send me Catalog No. 22 ☐ Send me Catalog No. 23

Name_____
Company Name_____
Address_____
City_____ State_____

For more details circle NED-142 J3 on enclosed inquiry slip

CONDUCTIVITY METER
gages water content of wood

Wherever wood is kiln dried, this meter can provide a quick nondestructive measurement of its moisture content by measuring its electrical conductivity. Instrument requires no preparation time and needs no wiring. It can be used on planks, scantling, boards, cores, plywoods, veneers, chipboards, etc. Direct reading scale range is from 6 to 26 per cent. Meter weighs 1½ lb and measures overall 7⅜ x 3⅞ x 2 5/16 in. Made by **Victor J. Krieg, Inc.**, 611 Broadway, New York 12, N. Y.

For more details circle NED-143 J3 on enclosed inquiry slip

POWDER ACTUATED TOOL
medium duty model drives ⅜-in. fasteners into steel and masonry

Supplied as a complete tool as well as a separate lower assembly for previously announced ½-in. capacity Jobmaster powder actuated fastener driving tool, the Plus-Power model has a ⅜-in. diameter barrel. This enables it to drive Tru-Set flat head drive pins and adjustable Utility head threaded studs into masonry or steel. Flat head pins have 5/32-in. shanks and are driven home so neatly that they fit flush with the surface. Adjustable head studs in lengths from 2½ to 3½ in. have diameter of 7/32-in., afford high shear strength and cost the same as drive pins.

This Plus-Power unit has a positive safety, ported barrel to dissipate gases harmlessly, a barrel shield adjustable to 42 positions for quick setting a row of fasteners and an angle-fire control. Weight of tool is only 6¾ lb, and driving speed is two fasteners per minute. Made by **Olin Industries, Inc.**, Ramset Fasteners Div., 12119 Berea Rd., Cleveland 11, O.

For more details circle NED-144 J3 on enclosed inquiry slip

DO YOU KNOW? Advanced techniques for fabricating clad steels are outlined on a convenient wall chart entitled "Clad Fabrication Data." Available to design and engineering as well as shop personnel, chart gives all basic information for arc-welding and flame cutting of clad steel plates. Chart is offered free by Lukens Steel Co., Marketing Service, 308 Lukens Bldg., Coatesville, Pa.

For more details circle NED-145 J3 on enclosed inquiry slip

SHORT RUN STAMPINGS

DESCRIBED IN NEW CATALOG No. 718

New catalog describes HPL's "know-how" which can save up to 80% of conventional tooling costs.

Facilities for producing stampings in runs of 25 to 25,000 pieces in various shapes and materials are described and shown. **HPL** is making this attractive four-page catalog available to production, purchasing and management personnel to assist them with their stamping problems. Catalog No. 718 will be sent to you upon receipt of publication or letterhead request.

1049-HPL

HPL Manufacturing Co.
15211 MILES AVENUE • CLEVELAND 28, OHIO

For more details circle NED-146 J3 on enclosed inquiry slip

VACUUM-PRESSURE APPLICATION GIVES BETTER VARNISH PENETRATION

Better penetration of electrical windings by insulating varnishes may be obtained by the vacuum - and - pressure method than by simple dipping procedures. Internal curing varnishes of the type manufactured by Irvington are particularly adaptable to this impregnating procedure.

Recommendations on degree of vacuum, amount of pressure, times and temperatures are available on specific insulating requirements from the **Sales Manager, Varnish Department, Irvington Varnish & Insulator Company, 14 Argyle Terrace, Irvington, New Jersey.**

Advt.

For more details circle NED-147 J3 on enclosed inquiry slip

SPIROL SOLVES THE TOUGH ONES:

SPIROL PIN fastens fragile plastic!

Radial spring action fastens knobs and panel without breakage

In fastening the plastic instrument panel above, Spirol Pins were used as bushings to absorb stress and eliminate the problem of breakage. In the same plane, Spirol's unique radial spring tension locks control knobs firmly to levers — eliminates screws entirely.

When compressed by insertion, SPIROL PINS exert even, all-round pressure, develop no weak "hinge" lines. Coils in light-duty pins are highly flexible, insert easily and without damage into brittle parts. "Live" action keeps pins locked tightly in hole — prevents material wearing loose around fastening.

For heavy duty applications, radial coils give SPIROL PINS enormous strength — unsurpassed resistance to vibration and shock. Available in standard diameters 1/32" to ½" — lengths, ⅛" to 4". Non-standard materials and sizes to order.

FREE! *Write for illustrated folder and sample SPIROL pins.*

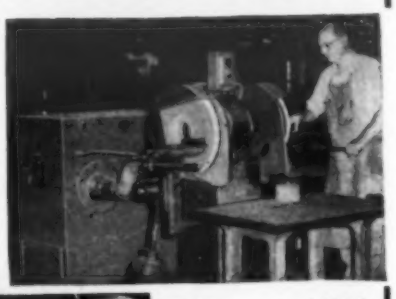
C. E. M. COMPANY
42 SCHOOL STREET • DANIELSON, CONN.

For more details circle NED-148 J3 on enclosed inquiry slip

STOP DUST INSTANTLY WITH DUSTKOP

300 cfm to 10,000 cfm standard pre-tested units available in stock

- LOW COST
- IMMEDIATE INSTALLATION
- SAVES HEAT
- PORTABLE



2405 ◀ cfm 1400▲ cfm

DUSTKOP

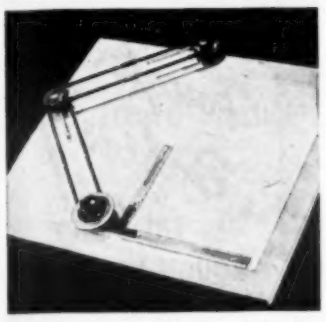
WRITE FOR

- RECOMMENDATION about your dust problem. No obligation
- CATALOG 605-2

AGET-DETROIT CO.

202 S. Main St. Ann Arbor, Mich.

▲ For more details circle NED-149 J3 on enclosed inquiry slip ▲



MAKE EVERY BOARD MORE PRODUCTIVE

Equip throughout with the

UNIVERSAL DRAFTING MACHINE

famous for its 360° Full-Vision Protractor

This precise instrument, without which no drawing board is complete, combines into one accurate unit most of the loose tools of the drafting art — T-square, protractor, triangles, scales and parallel rules. It speeds all classes of work, improves its quality, and lessens operator fatigue.

This improved drafting machine in your plant will speed ideas to the blueprint stage — will cut engineering costs — will improve drafting room efficiency. Write for descriptive bulletin outlining the many exclusive features that have made Universal Boardmaster the favorite drafting machine of American industry.

UNIVERSAL DRAFTING MACHINE CORPORATION
7960 Lorain Avenue • Cleveland 2, Ohio

UNIVERSAL
DRAFTING MACHINE DURALINE SCALES

▲ For more details circle NED-150 J3 on enclosed inquiry slip ▲

NEW! FAST! EASY!

PRINT FACSIMILE LABELS DIRECT TO CONTAINERS

Here's the new system that eliminates labels and the old stencil board—ink brush method of addressing and marking shipping containers. With the new Web-O-Print JC-3 hand printer and a Kustom-Kut (die-cut) stencil, you can print both facsimile label and shipping information direct to cartons or boxes *in one operation* . . . at the rate of 40 to 50 cases per minute!

Kustom-Kut stencils are pre-cut to print your label or form. Address and other variable information are typed in . . . stencil is quickly attached to Web-O-Print . . . label and address are then printed on container in a single movement.

Web-O-Printing is a fast, clean one-hand operation. Prints on rough and cylindrical surfaces. Leaves a sharp, compact, fade-proof and waterproof print. Can be easily blocked out for re-shipping.

FREE SAMPLE PRINT Write today for a sample print and information on trial offer. No obligation.

Weber LABEL AND MARKING SYSTEMS
Division of Weber Addressing Machine Co.
Dept. NE-2, Mount Prospect, Ill.

▲ For more details circle NED-151 J3 on enclosed inquiry slip ▲

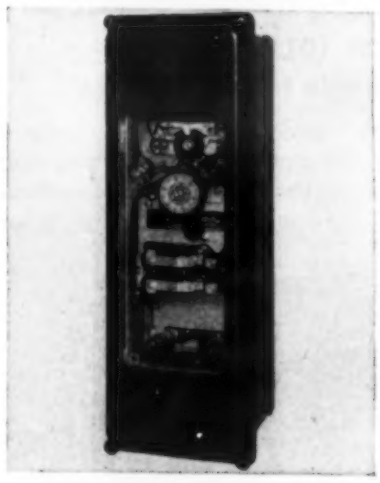
HARDNESS TESTERS feature automatic load changing and magnified optical readings

Providing automatic load changing and magnified optical readings at no extra cost, Italian-made Superficial and Standard hardness testers project magnified scales onto a built-in screen. The Superficial model provides loads from 5 to 45 kgm, and the Standard handles Brinell measurements from 30 to 1000 Brinell units, Rockwell tests, special loads and Vickers measurements. Units accept samples up to 7½ in. thick, and have a dial which immediately switches loads in the interior of the instrument. Speed of load application is regulated by a built-in oil damper with external control.

Instruments are supplied with a variety of anvils and steel ball penetrators, with a diamond cone penetrator provided as an accessory. A complete line of other accessories is available. Dust-tight and grease-proof metal cases are also featured, and the various weights are exact and precision made. Distributed by **Opplem Co.**, 352A Fourth Ave., New York 10, N. Y.

▲ For more details circle NED-152 J3 on enclosed inquiry slip ▲

AUTOMATIC RECLOSING RELAY features instantaneous trip locknut



Designed primarily to control automatically the reclosing operation of a circuit breaker, type RC automatic reclosing relay will prevent repetitive tripping due to the instantaneous trip of the protective relay. Additional external terminals provide connections to internal coils and contacts to permit unit's application to all types of circuit breaker control schemes. Adjustable reclosing time sequences of 60, 90, 180 or 360 seconds are provided by a 600-rpm synchronous motor with an adjustable ratio gear train. It is also available with an adjustable integrating lockout device which limits the successive circuit breaker reclosures to a safe value. Made by **Westinghouse Electric Corp.**, P. O. Box 2099, Pittsburgh 30, Pa.

▲ For more details circle NED-153 J3 on enclosed inquiry slip ▲

DENISON Hydraulic PUMPS and CONTROLS
For Every Need—to 5000 psi

Denison offers today's most rapidly growing line of oil-hydraulic pumps, motors, and control valves for every need—for operation at all pressures to 5000 psi. Backed by 27 years of specialized experience in oil-hydraulics, Denison equipment has proved its extra efficiency and durability under long, hard, continuous service of all kinds. Write for Denison catalogs on:

Axial-Piston Fluid Motors . . . Vane-type Fluid Motors . . . Axial Piston Pumps . . . Vane-Type Pumps . . . Complete Pumping Units . . . Directional Controls . . . Pressure Controls . . . Sequence Controls . . . Relief Valves . . . Pressure Reducing Valves . . . Multi-Range Flow Controls . . . Check Valves . . . Surge Damping Controls . . . and other types of hydraulic equipment.

The DENISON Engineering Company
1151 DUBLIN ROAD, COLUMBUS 16, OHIO

DENISON HydrOILics "The Finest Money Can Buy!"

▲ For more details circle NED-154 J3 on enclosed inquiry slip ▲

WHY BUY 3 to 5 CANS when only one will do?

No—a WITT CAN won't hold more than any other Can of equal capacity. However—WITT CANS are *guaranteed to outlast 3 to 5 ordinary Cans.* Here's an offer of reduced purchases and dollar savings worth investigating. Perhaps you're wondering why WITT CANS last so long. Here are just a few reasons:

STRAIGHT SIDES—assure extra resistance to rough handling.
DEEP ROLLING CORRUGATIONS—run full length of Can, adding further rigidity.
HEAVY GAUGE STEEL—provides battleship ruggedness.
STRUCTURAL STEEL BANDS—protect top and bottom of Can and act as shock absorbers.
HOT DIP GALVANIZING—a hand process after fabrication, insuring heaviest possible rustproofing.
PINCH-PROOF HANDLES—for easy handling.
STURDY LID—snug fitting, yet easy to remove.

Witt Cans "Originators of the Corrugated Can" WITT CANS HAVE THE "RIGHT" ANGLE

THE WITT CORNICE COMPANY, 2124 WINCHELL AVENUE, CINCINNATI 14, OHIO

▲ For more details circle NED-155 J3 on enclosed inquiry slip ▲

How to get MORE PRODUCTION MINUTES per hour!

Don't walk—TALK with Executone Intercom!

No need to waste time shuffling back and forth for information and instructions. Just push a button and *talk!* Walking time becomes *production* time. With Executone roving employees are located instantly...telephone lines are kept open for outside calls...more work gets done *faster!* Thousands of installations prove that Executone cuts costs and increases production—*pays for itself many times over!*

Executone
INTERCOM AND VOICE PAGING SYSTEMS
Service on your premises by factory trained technicians

Get the Facts! EXECUTONE, INC., Dept. J-4
415 Lexington Ave., New York 17, N. Y.
Without obligation, send booklet describing how Executone helps cut costs. I am particularly interested in:
☐ Plant-office communication ☐ Switchboard relief
☐ Locating personnel ☐ Penetrating high noise levels
Name_____ Title_____
Firm_____
Address_____ City_____

In Canada—331 Bartlett Ave., Toronto

▲ For more details circle NED-156 J3 on enclosed inquiry slip ▲

Increased Insulation
BETTER CONNECTIONS
JONES BARRIER TERMINAL STRIPS

Leakage path is increased—direct shorts from frayed terminal wires prevented by bakelite barriers placed between terminals. Binder screws and terminals brass, nickel-plated. Insulation, black molded bakelite. Finest construction. Add much to equipment's effect.

Jones Means Proven Quality

Illustrated: Screw Terminals—Screw and Solder Terminals—Screw Terminal above Panel with Solder Terminal below. Every type of connection.

Six series meet every requirement: No. 140, 5-40 screws; No. 141, 6-32 screws; No. 142, 8-32 screws; No. 150, 10-32 screws; No. 151, 12-32 screws; No. 152, ¼-28 screws.

Catalog No. 18 lists complete line of Barrier Strips, and other Jones Electrical Connecting Devices. Send for your copy.

Jones
HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

For more details circle NED-157 J3 on enclosed inquiry slip

for thorough dust collection at the lowest cost
specify dustube® COLLECTORS

The cost of a dust collection system is not a measure of its efficiency. Dustube Collectors provide the most thorough dust removal, yet are low in cost, inexpensive to operate and simple to maintain. Many users have reported that "They are the least expensive of all dry type collectors to operate and maintain."

The 10 operating advantages that make this type of performance possible are described in Catalog 372. Send for a copy today.

American WHEELABRATOR & EQUIPMENT CORP.
508 S. Byrkit St., Mishawaka 8, Ind.
dustube® COLLECTORS

for the most efficient dust collection money can buy
specify dustube® COLLECTORS

Dustube Collectors remove dust with virtually 100% efficiency handling the heaviest dust creating operations and the finest atmospheric dust with equal ease. The newly developed Dustube Ultra Filtration principle removes even the dust you can't see. It removes all the minute particles that are injurious to precision machinery and processes.

The 10 operating advantages that make this type of performance possible are described in Catalog 372. Send for a copy today.

American WHEELABRATOR & EQUIPMENT CORP.
508 S. Byrkit St., Mishawaka 8, Ind.
dustube® COLLECTORS

For more details circle NED-158 J3 on enclosed inquiry slip

MACHINE TOOL MODELS
scale model kit offered on free loan basis for plant layout work

Several models each of nine different machine tools are included in standard scale model kit which is offered on a free loan basis for making scale shop layouts. Scaled ¾-in. to 1 ft, models include six sizes of bench and floor model lathes, pedestal drill grinders, drill presses and bench shapers. Also in kit are models of workmen and floor plan layout sheets which are cross-ruled to the same scale as the models.

To use the kit effectively, it is only necessary to sketch the shop floor plan to scale on the cross-ruled layout sheet, indicating the locations of doors, windows, columns, stationary benches and other fixed facilities. Machine tool models are then placed on the floor plan and moved about until the optimum arrangement is obtained. User must pay transportation charges both ways, but kits are loaned without charge by **South Bend Lathe Works,** 307 E. Madison St., South Bend 22, Ind.

For more details circle NED-159 J3 on enclosed inquiry slip

BELT CONVEYOR IDLER
is variable angle troughing type

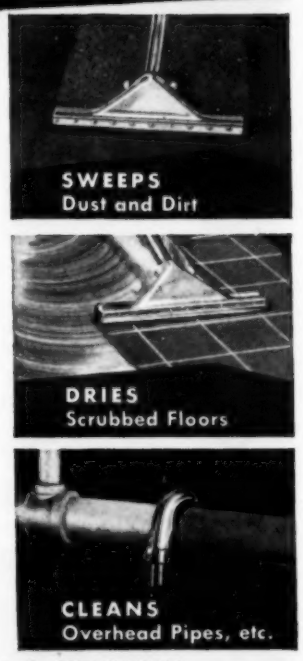
Designed to provide smooth transition between troughing idlers and flat pulley, this troughing conveyor idler has an inclination angle variable between

horizontal and 20 degrees. It permits a gradual flattening of the belt as it approaches the head pulley, thus minimizing stress and resulting in longer belt life. Two series are available, No. 100 in seven belt widths from 24 to 60 in. for light and medium duty, and No. 200 in six widths from 36 to 72 in. for heavy duty. Made by **Link-Belt Co.,** Dept. NED, 307 N. Michigan Ave., Chicago 1, Ill.

For more details circle NED-160 J3 on enclosed inquiry slip

HILD Heavy-Duty PORTABLE VACUUM
Always Ready for Wet or Dry Dirt Removal

No adjustments to make...no filter to change when switching to wet pick-up work. Moisture in vacuum air stream cannot damage HILD Bi-Pass Motor. Special attachments for scores of clean-up jobs. Two sizes: 10 or 40 gallon liquid capacity.



HILD System MAINTENANCE EQUIPMENT & SUPPLIES

Write for FREE CIRCULAR
HILD FLOOR MACHINE CO.
740 W. Washington Blvd., Dept. NE-9 Chicago 6, Ill.
Factory Branches: 250 E. 43rd St., New York 17, N. Y.
4271 W. Third St., Los Angeles 5, Cal.

For more details circle NED-161 J3 on enclosed inquiry slip

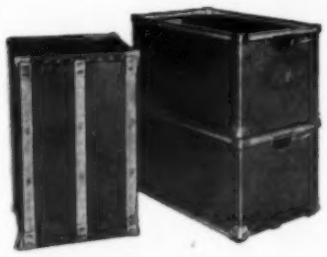
Make Light Work of HEAVY PACKAGES
Put Them on ALVEY CONVEYORS

Alvey Conveyors are application-engineered . . . they are designed to accomplish a particular purpose in your plant. At your convenience an Alvey engineer will visit your plant to help you determine how conveyors can save money and increase production for you. Write for an appointment.

ALVEY CONVEYOR MFG. CO.
9259 Olive Street Road • St. Louis 24, Mo.
Branch Offices In All Principal Cities

ALVEY

For more details circle NED-162 J3 on enclosed inquiry slip



Tough Babies!
THEY DEFY ROUGH HANDLING!

LOWER COST Material Handling favors these rugged items! Mill-box above features steel compound Top rail (see inset) and Bulge corners, both extraordinary wear-resisting. Note slat reinforcing and non-jamming "nesting limits"

BOTH BUILT BY "BAL" BUILT WITH A CONSCIENCE FOR MATERIAL HANDLING

Nesting tote boxes at right, also built with handles and strongly reinforced all-fibre; hard, vulcanized for severe usage.

ALSO HARD VULCANIZED FIBRE TRUCKS, DRUMS, SPECIAL CASES.
• *Write for Catalog!*

WILLIAM BAL CORPORATION
11 Johnson St, Newark 5, N. J.

For more details circle NED-163 J3 on enclosed inquiry slip

INDUSTRIAL buyers have learned to depend on ANTI-CORROSIVE for fast, dependable service on all types of stainless steel fastenings. Draw on our IN STOCK inventory of more than 7,000 items and sizes and a production capacity geared to produce precision fastenings in large or small quantities, from huge ⅞" hexagon head bolts to tiny #0-80 machine screw nuts.

Write for Catalog 53T today.

anti-corrosive metal products co., inc.
castleton-on-hudson, new york

For more details circle NED-164 J3 on enclosed inquiry slip

C.H.F. Sectional Tables WITH SWING SEATS

MAXIMUM SEATING IN ANY SIZE SPACE

For Recreation Rooms . . . Factory Work Tables

Available in units to seat 4 to 24 people, "CHF" Sectional Tables may be purchased in varying lengths to meet your exact requirements. Seats swing completely under table out of the way to give you full aisle space. Your choice of seats . . . with or without backs . . . cast iron frame construction in a variety of colors. "CHF" Sectional tables are standard equipment for schools, factories, clubs, churches and all types of institutions.

WRITE FOR ILLUSTRATED CATALOG AND PRICE LIST!

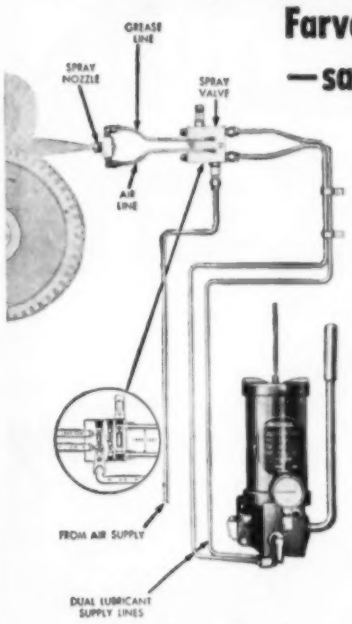
THE CHICAGO HARDWARE FOUNDRY CO.

"Dependable Since 1897"

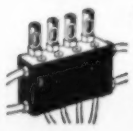
1993 Commonwealth Ave. North Chicago, Ill.

For more details circle NED-165 J3 on enclosed inquiry slip

Lubricate open gears evenly with Farval Spray Valve —save up to 95%



• For three years, Farval Spray Valve Systems have been distributing and maintaining oil or grease films evenly on open gears and slide surfaces. Farval Spray Valves save up to 95% of lubricant, eliminate friction, increase machine efficiency, lower power costs, reduce wear on bearing surfaces. Write for Farval Spray Valve Bulletin No. 60 today.



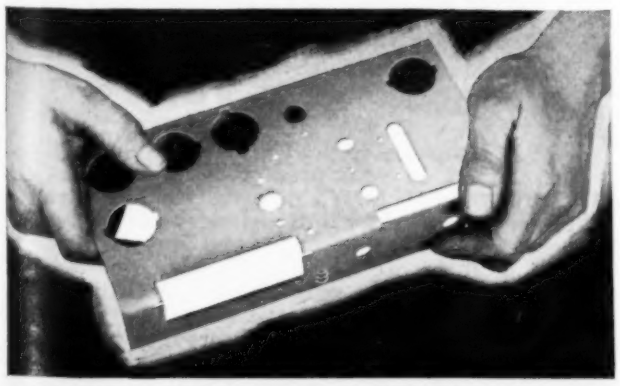
THE FARVAL CORPORATION

Centralized Systems of Lubrication

3283 East 80th Street, Cleveland 4, Ohio

Affiliate of The Cleveland Worm & Gear Company, Industrial Worm Gearing.

For more details circle NED-166 J3 on enclosed inquiry slip



COPPER-PLATED PARTS STAY BRIGHT AND CLEAN

when Coated with WATER DIP #33

Here's a simple, low-cost finish that keeps copper-plated surfaces bright, free from fingerprints, chemically clean. It's M & W Water Dip #33. Work goes directly from the last hot water rinse into Water Dip #33—no need for rehandling and drying!

For the complete story on Water Dip #33, write for Bulletin #117, or let our M & W technical consultant discuss your requirements privately with you.

PIONEERS IN PROTECTION

MAAS & WALDSTEIN CO. 2116 McCARTER HIGHWAY NEWARK 4, NEW JERSEY

Midwest Div.: 1658 Carroll Ave., Chicago 12, Ill. • Pacific Coast Div.: Smith-Davis Co., 10751 Venice Blvd., Los Angeles 34, Cal.

MANUFACTURERS OF INDUSTRIAL FINISHES

For more details circle NED-167 J3 on enclosed inquiry slip

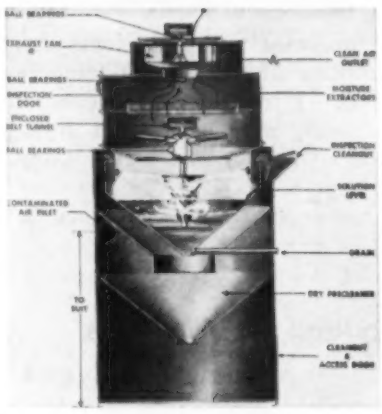
LABORATORY GRAVITY OVENS redesigned for more versatility and greater ease of operation

Redesigned series of electric laboratory ovens now offers greater versatility and ease of operation. Units are complete and ready to plug into 115 or 230-v outlets. Operating temperature range is 38° to 288° C. Features include recessed slanted base to protect control components, one-piece etched wiring panel which allows easy inspection and maintenance, double banked Modella heater, power selector switch for reducing wattage consumption in balance with operating temperature and UL-approved automatic hydraulic control with sensitivity of plus-minus ½° C

Fiberglas insulation has been increased to 3½-in. thickness on all six sides. Of double wall construction, ovens are offered in all stainless steel or with stainless interior and baked enamel exterior. Available inside dimensions are 8 x 8 x 8 in., 12 x 12 x 12 in. and 19 x 18 x 15 in. Made by **Blue M Electric Co.**, 307 W. 69th St., Chicago 21N, Ill.

For more details circle NED-168 J3 on enclosed inquiry slip

DUST & FUME ELIMINATORS combine rotary and water cleansing



Available in two models, vertical rotor dust and fume eliminators have capacities ranging from 500 to 50,000 cfm. One unit is used for wet collection and elimination only, while the other is a combination wet/dry type, useful where material salvage is of importance. Both units combine the cyclonic principle of dust separation and positive high pressure water action. Units are available with an integrally constructed fan or can be arranged for standard fan installation, while waste disposal collected in the tank is by drag conveyor, hopper tank skim-off, or manual clean-out. Clean-out doors permit cleaning while in operation, and bearings are so arranged that they can be lubricated from outside and are out of the liquid and enclosed in dust-tight covers. Made by **Schmieg Industries, Inc.**, 315 Piquette Ave., Detroit 2, Mich.

For more details circle NED-169 J3 on enclosed inquiry slip

For more details circle NED-170 J3 on enclosed inquiry slip

"Maverick" usually spells trouble, to the production line as well as the open range. An unknown quantity, its performance and quality are questionable. For all solder products, there's never any doubt when you choose Kester . . . the one "brand" that's always consistent, always dependable.

YOUR FREE COPY *of the Kester Technical Manual, "SOLDER and Soldering Technique," is waiting for a letter or a card. Won't you WRITE TODAY?*

KESTER

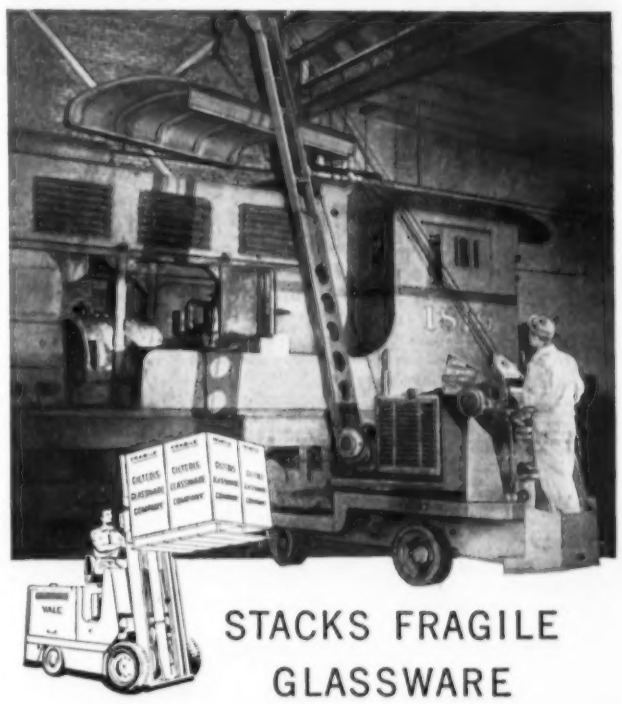
SOLDER COMPANY

4249 Wrightwood Avenue • Chicago 39, Illinois

Newark 5, New Jersey • Brantford, Canada

For more details circle NED-171 J3 on enclosed inquiry slip

LIFTS THE LID ON A LOCOMOTIVE



STACKS FRAGILE GLASSWARE

Yale Electric Trucks give safe handling . . . cut costs as much as 75%

DIFFERENT LOADS call for different equipment—and the comprehensive YALE line offers exactly the truck your job requires, whatever your business may be.

Because YALE Trucks offer these special features: Hypoid Gears, Involute Spline Drive Shafts, and Yale Lift Channels, users report costs reduced as much as 75%.

YALE's wide variety of models includes Gas, Diesel, LP-Gas, Gas-Electric, and Electric in capacities up to 100,000 lbs. Attachments available for specialized handling jobs.

YALE*

MATERIALS HANDLING EQUIPMENT

*Registered in U. S. Patent Office

MAIL THIS COUPON TODAY

The YALE & TOWNE Manufacturing Co., Dept. 379

Roosevelt Blvd. and Haldeman Ave., Phila. 15, Pa.

Please send my free copy of *Picture Story of Yale Materials Handling Equipment.*

Company_____

Name_____ Title_____

Street_____ City_____ State_____

In Canada write: The Yale & Towne Mfg. Co., St. Catharines, Ontario, Canada

Gas, Electric, Diesel Lift Trucks • Worksavers • Hand Trucks Hand and Electric Hoists • Pul-Lifts

For more details circle NED-172 J3 on enclosed inquiry slip

Exclusive Ladscaf feature "Snap-Clamps" bridges and braces to panels without bolting or using tools. Easily erect simple towers, mount on casters or extend in runs to scaffold large interiors. "Climb" stairs or erect on sloping floor levels with ease.

Call on UNIVERSAL'S ENGINEERING SERVICE to help you plan your Scaffolding Layouts by combining Ladscaf with Universal Ezebilt and Endlok pipe-and-clamp scaffolding. Write for information catalog N-9.

UNIVERSAL MANUFACTURING CORP. ZELIENOPLE, PA.

"World's Largest Producer of Steel-Panel Scaffolding"

Distributors Offer Fast Help and Service - Consult Your Phone Directory

▲ For more details circle **NED-173 J3** on enclosed inquiry slip ▲

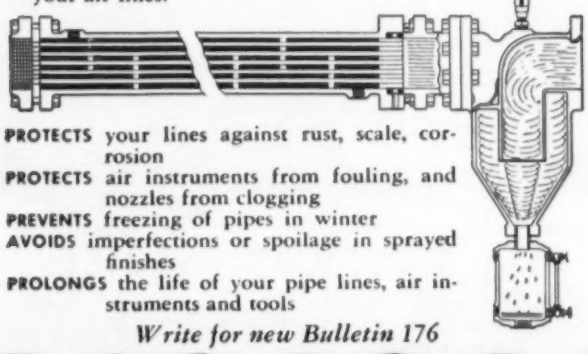
You Can be Sure of Clean Dry Air for your Compressed Air Tools

3500 Gallons

1 YEAR'S water extraction from air lines equipped with Adams Aftercooler and Cyclone Separator.

with **ADAMS** Aftercooler and Cyclone Separator

● Reducing compressed air temperature to within 10° of the cooling water, Adams Equipment condenses and removes destructive water and oil vapors from your air lines.



PROTECTS your lines against rust, scale, corrosion
PROTECTS air instruments from fouling, and nozzles from clogging
PREVENTS freezing of pipes in winter
AVOIDS imperfections or spoilage in sprayed finishes
PROLONGS the life of your pipe lines, air instruments and tools

Write for new Bulletin 176

R. P. ADAMS CO., INC. 227 E. PARK DRIVE BUFFALO 17, N. Y.

▲ For more details circle **NED-174 J3** on enclosed inquiry slip ▲

Backstand belts cut costs!

Learn more about this money-saving method

The backstand-belt method of metal polishing is being used in more and more plants. Why? Because it saves time, cuts costs. Belts cut faster, cooler than set-up wheels – and cut down on the number of your operations. To learn more about this modern method of metal finishing, send for Armour's free booklet, "Backstand-Belt Polishing."

mail this coupon today

Please send booklet "Backstand-Belt Polishing."

Name_____ Title_____

Company_____

Address_____

City_____ Zone____ State____

ARMOUR *Coated Abrasives*

Armour and Company • North Benton Road • Alliance, Ohio

▲ For more details circle **NED-175 J3** on enclosed inquiry slip ▲

INTERCOMMUNICATION SYSTEM
two-station "wireless" installation

Requiring no wired installation, the Talk-A-Phone LC-33 two-station intercommunication system can be plugged into any electrical outlet. "Sonic Gate" feature screens out hum and noise. System can be used for instant or temporary applications and permits talking between offices, warehouses or plants. Units can be moved from place to place as needed. More stations can be added at any time, all stations being able to receive messages transmitted from any point. Also featured is the Uni-Trans system for dictation and supervisory control which does away with need for operating any controls while dictating. Made by **Talk-A-Phone Co.,** 1512-Q S. Pulaski Rd., Chicago 23, Ill.

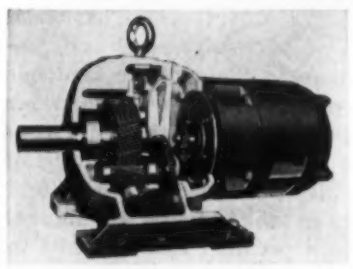
▲ For more details circle **NED-176 J3** on enclosed inquiry slip ▲

ELECTRIC HAND DRYER
is virtually self-cleaning

Improved model of the National electric hand dryer features a double squirrel cage type fan as did the previous model, but its blades are so designed and mounted as to make the fan virtually self cleaning. New fan delivers more air and operates with less noise than previous model, discharging 152 cfm at a temperature of 135° F in a 72° F room. Dryer cuts off automatically in 30 seconds, with most hand drying taking 20 seconds. Made by **National Dryer Corp.,** 616 W. Adams St., Chicago 6, Ill.

▲ For more details circle **NED-177 J3** on enclosed inquiry slip ▲

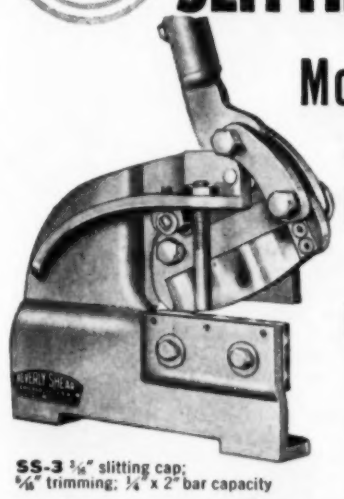
GEARMOTORS
to fit varying load requirements



Series of integral gearmotors in ratings from 1 to 15 hp, are available in a wide range of speeds in single, double and triple gear reductions. Units meet AGMA class I, II and III specifications and fit specific needs of the user. Motors can have constant or varying speeds and protective frames for operation under most atmospheric conditions. Made by **Century Electric Co.,** 1812 Pine St., St. Louis 3, Mo.

▲ For more details circle **NED-178 J3** on enclosed inquiry slip ▲

NEW *Beverly* **SLITTING SHEAR**



More Power... *Easier Cutting*
Exclusive Design *Cleaner Cuts*
Ruggedly Built *last a lifetime*
Capacities to 3/16"

SS-3 3/16" slitting cap; 5/16" trimming; 1/4" x 2" bar capacity

Get faster, easier slitting and trimming with a new design Beverly "SS" Series Slitting Shear. Rigid, strongly braced frame; compounded linkage and extra strength where needed. Many exclusive features. Write for FREE illustrated Bulletin.

See your Beverly Distributor today.
Ask for a demonstration—no obligation.

Beverly **SHEAR MFG. CO.**

3016 W. 111th STREET • CHICAGO 43, ILLINOIS

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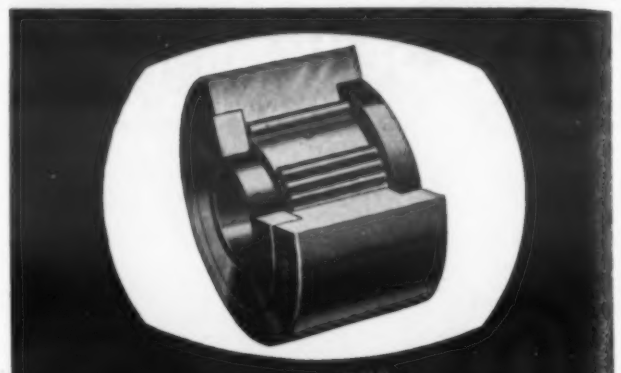

versatility
for cam follower mounting provided with
MULTIROL® **CYR** bearings

With this series it is possible to utilize the full advantages of Multirol Cam Follower bearings in a yoke mounting. In the CYR bearing an inner race replaces the stud to further increase the adaptability of precision cam followers in automatic machinery requiring cam action or guide and support rollers.

Send for McGill Catalog No. 52

McGILL® precision bearings

McGILL MANUFACTURING CO., INC. 101 N. Lafayette St. Valparaiso, Indiana

▲ For more details circle **NED-180 J3** on enclosed inquiry slip ▲

use your 1/4" drill...

drill up to 2 9/16" diameter hole
IN THE HARDEST WOOD!

Simply snap the KORNER KING right angle attachment on your present heavy duty drill (1/4" or larger). LOW side gives you 80% more power at half rpm . . . HIGH side doubles your drill's rpm. Drill holes up to 2-9/16 inch in diameter in the most inaccessible spots – between joists and studs, in tight corners, etc. All with 100% safety because an exclusive RCS Torque Release eliminates dangerous torque reaction if drill jams . . . drive shaft continues turning if load or obstruction ever locks driven shaft or bit.

RCS SUPER SPEED BITS range in size from 5/8" to 2-9/16" diameters. Their new, simple design requires less torque, needs less thrust. Fast acting, cool running and long lasting, RCS SUPER SPEED BITS assure economical operation – as well as low initial cost. They're easy to sharpen, inexpensive to replace.

Extra extensions are available for these new RCS SUPER SPEED BITS which permit drilling holes, in perfect alignment, to just about any length.

If you use a drill, learn more about how RCS KORNER KING and RCS SUPER SPEED BITS can increase its efficiency and versatility.

WRITE DEPT. NE-9 TODAY FOR COMPLETE DETAILS

R.C.S. TOOL SALES CORPORATION
JOLIET, ILLINOIS, U.S.A.

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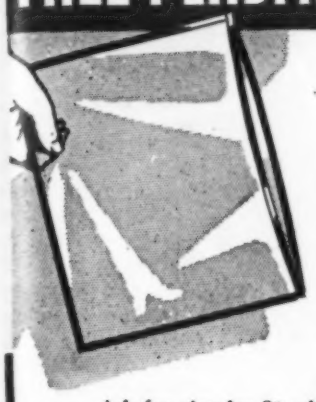
WANTED

5000 MORE PLANT MANAGERS TO ASK FOR

FREE PLASTIC ENVELOPE



TO PROTECT JOB-TICKETS

Ask for your FREE plastic envelope that'll keep your work-records clean and readable . . . Don't gamble with dirty fingerprints. And don't let a grease spot raise havoc with your instructions.

Ask for circular S2 which illustrates the different sizes and styles of our transparent envelopes. They are rugged, and can be used over and over again . . . What's more they are trouble-savers, and money-savers—and cost no more than a pack of cigarettes.

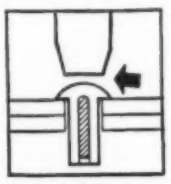
Send for your FREE Kleer-Vu envelope today!

AMERICAN KLEER-VU PLASTICS, INC.
53-06 Grand Ave. Maspeth 78, N. Y.

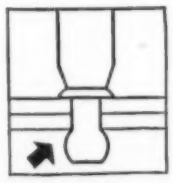
▲ For more details circle NED-182 J3 on enclosed inquiry slip ▲

DU PONT EXPLOSIVE RIVETS

Now Available in ¼" Diameter



1. Touch head of Explosive Rivet with heated Du Pont Riveting Iron. (Note tiny explosive charge in Rivet shank.)



2. Almost instantly . . . charge expands, forming a barrel-shaped head on shop end of Rivet that sets it in place.

Both Brazier and Countersunk Head Type Du Pont Industrial Explosive Rivets are now made in ¼" diameter. These new larger rivets have all the advantages of the smaller ones . . . wide grip range . . . speedy, one-man installation . . . no after-finishing. *You* do the whole job, operating only from the head side of Rivet without a bucking bar. Send for manual describing how Explosive Rivets help insure efficient fastening. *Contact nearest* Du Pont Refinish Service Warehouse, or write: E. I. du Pont de Nemours & Co. (Inc.), Explosives Dept., Wilmington 98, Delaware.

DU PONT *Hi-Speed* INDUSTRIAL EXPLOSIVE RIVETS

A Product of Du Pont Explosives Research

DU PONT — Better Things for Better Living . . . through Chemistry

▲ For more details circle NED-183 J3 on enclosed inquiry slip ▲

The Simplest Way to

SOLVE SCALE PROBLEMS

PATS. APPLIED FOR

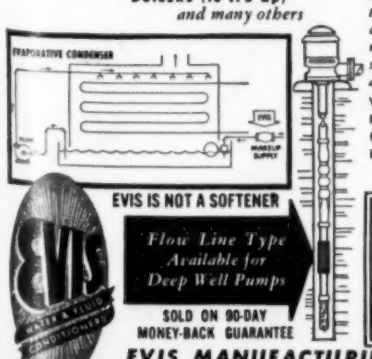
Proven Uses Include
ALL PIPING SYSTEMS
CONDENSERS (most types)
COOLING TOWERS
ENGINES & COMPRESSORS
CUBE & FLAKE ICE MAKERS
BOILERS (to 175 wp)
and many others

"Best bet yet!"

EVIS Water Conditioners are helping industry conquer its costly scale problems. Plant equipment is made to operate at higher efficiency. Maintenance costs are profitably lowered and shut-downs for periodic cleanups are often entirely eliminated. The EVIS units are Specially Processed to impart a continuous catalytic action on water-solids flowing through it. This action alters physical behavior sufficiently to inhibit most scale formations. Many thousands of EVIS Water Conditioners are now in service.

Write for further information or ask your Plumbing Supply, Air-Conditioning-Refrigeration or Industrial Equipment Jobber.

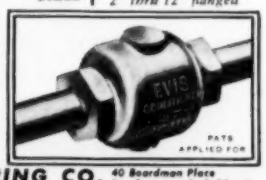
SIZES | ½" thru 2" screwed; 2" thru 12" flanged



EVIS IS NOT A SOFTENER

Flow Line Type Available for Deep Well Pumps

SOLD ON 90-DAY MONEY-BACK GUARANTEE



PATS. APPLIED FOR

EVIS MANUFACTURING CO. 40 Boardman Place, San Francisco 3, California

FRANCHISED REGIONAL DISTRIBUTORS

WHITTIER (Calif.) REN-EVIS COMPANY, 11146 E. Whittier, OX 9-2211
SAN BERNARDINO (Calif.) KNUPPE & WRIGHT, 220 E. 46th St., SB 8-7838
SAN FRANCISCO NORTH-EVIS AGENCY, 74 Dorman Ave., MI 7-3822
RENO WATER CONDITIONED SALES CORP. Western Amer. Life Bldg., 2-5639
SEATTLE EVIS-NORTHWEST, 2417 E. Marginal Way, EL 6116
CHICAGO EVIS-GREAT LAKES COMPANY, 201 N. Wabash Ave., ST 2-5948
OMAHA EVIS-MIDWEST, INC. 7304 Dodge St., JA 7044
DALLAS EVIS-SOUTHWEST CO. 8637 Chevy Chase, EM 0137
ATLANTA EVIS-SOUTHEAST CO. 745 Spring St., N.W., VE 0241
PHILADELPHIA EVIS-MIDEAST CO. 4 E. Richmond St., NE 4-0855
ALBANY (New York) EVIS-NORTHEAST CO. 37 Ripple Dr., UN 9-7921
EXCLUSIVE MARINE DIST. MORAN-EVIS CO., SAN FRANCISCO 420 Market St., DO 2-4565

▲ For more details circle NED-184 J3 on enclosed inquiry slip ▲

BULK MATERIALS FEEDER handles sticky, nonflowing mixtures at rates up to 65 tons per hour

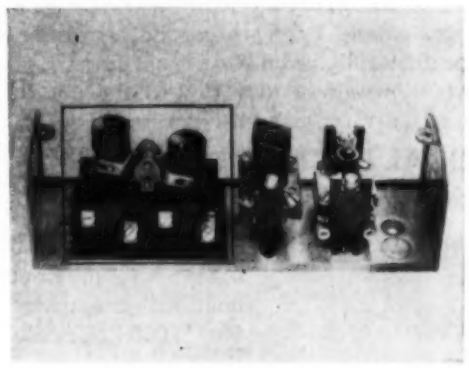
Sticky or otherwise nonflowing bulk materials are easily handled by this Com-Bin feeder. Model shown is capable of taking intermittent charges weighing up to 10,000 lb and leveling them out to an even, uniform flow onto a belt conveyor. Bin with 12-ft diameter top and 11-ft diameter discharge table both revolve. Bin holds a 15-minute supply when discharging at rate of 65 tons per hour. Feeders are made in all sizes down to a 8-in. diameter, 12-in. high unit which feeds at rate of 3 grams every 8 seconds.

Feeder consists of cylindrical shell mounted concentrically on rotating vertical shaft. Mounted on same shaft below cylinder is circular plate. Gap between plate and cylinder bottom is variable to suit material. Stationary plow angled through gap removes continuous stream of material from bottom of mass in cylinder, discharging it off edge of plate. Made by **Pulva Corp.**, 553 High St., Perth Amboy, N. J.

▲ For more details circle NED-185 J3 on enclosed inquiry slip ▲

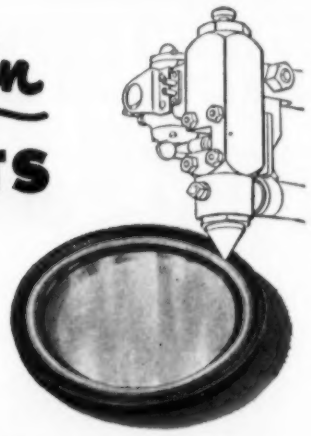
HEAVY DUTY PUSHBUTTON switch has 2-point units

Consisting of two 2-point units, each with one normally-open and one normally-closed contact, this maintained-contact heavy duty pushbutton is permanently assembled. It incorporates a snap-action over-center toggle mechanism which assures positive action. Rating is 10 amp continuous and 50 amp maximum interrupting at 110-v ac. Green, yellow, blue, brown, gray, red and black colors are available. It can be furnished in open form or in a surface mounted steel enclosure. Made by **Westinghouse Electric Corp.**, P. O. Box 2099, Pittsburgh 30, Pa.



▲ For more details circle NED-186 J3 on enclosed inquiry slip ▲

Flowed-in GASKETS



can cut costs and improve results!

Now! *Flow* gaskets into place at speeds up to 300 per minute. Gaskets become integral with the part — meet a wide range of problem conditions.

SIMPLE APPLICATION. Instead of installing pre-cut gaskets by hand, you merely *flow* a synthetic resin or rubber compound into position (horizontal or vertical surface). After baking, compound becomes solid, rubbery.

BUILT-IN RESISTANCE PROPERTIES. You create effective seals against weather, gases, solvents, moisture, oils, hydraulic fluids, pressure. Form shock-resistant cushions.

IMPORTANT ECONOMIES. You eliminate stamping, gluing, crimping, welding, and other time-consuming operations. Save on materials, too.

SEND FOR BOOKLET NOW.

DEWEY and ALMY Chemical Company
Cambridge 40, Mass.

▲ For more details circle NED-187 J3 on enclosed inquiry slip ▲

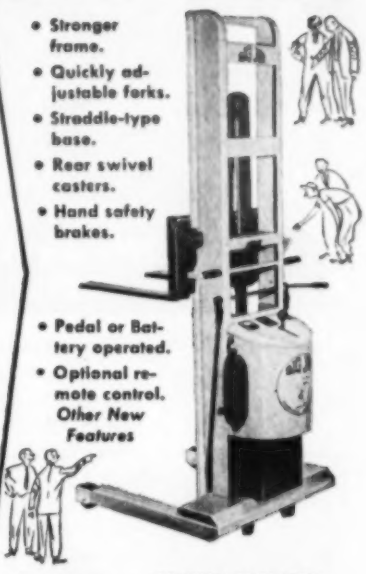
the NEW *BIG JOE

HYDRAULIC LIFTS

Master many more tasks to Trim Your Handling Costs

- Stronger frame.
- Quickly adjustable forks.
- Straddle-type base.
- Rear swivel casters.
- Hand safety brakes.
- Pedal or Battery operated.
- Optional remote control.

Other New Features



PEDAL CONTROL
Capacity 750 lbs.
Lifting heights to 68"
Priced from $281.50
(Other models from $236.50)

BATTERY OPERATED
Capacity 1000 lbs.
Lifting heights to 80"
Priced from $672.50
(Other models from $587.50)

Over 30 Models
Ask for Demonstration

*T.M. Reg. in U.S. Pat. Off.

Distributors in Principal Cities

BIG JOE MANUFACTURING COMPANY
908 W. Jackson Blvd. • Chicago 7, Ill.
Cable Address: Big Joe

Let BIG JOE do it!

▲ For more details circle NED-188 J3 on enclosed inquiry slip ▲

FOR MATERIAL HANDLING—

more and more—the swing is to wide-base pneumatic tires

GENERAL

INDUSTRIAL PNEUMATIC TIRES

More Designers are specifying wide-base General Pneumatics. They know Generals add these extra selling points to handling equipment.

SAVE TIME • MONEY • LABOR

- MORE LOAD CAPACITY AT LOW OR HIGH SPEEDS
- CUSHION EQUIPMENT AND LOADS REDUCING BREAKAGE AND SPILLAGE
- SAVE HIGH COST FLOORS AND FLOOR SURFACES
- SLOW, EVEN WEAR FOR LONG SERVICE
- HIGH FLOTATION FOR EASIER ROLLING OVER SOFT GROUND
- ROLLS EASIER, SMOOTHER OVER ALL SURFACES

Available separately or in assemblies of Tires, Tubes and Wheels. Size O.D. 8" to 27"—200 to 4000 lbs. cap. for low or high speeds.

THE GENERAL TIRE

Rigid **CASTER FORKS** *Swivel*

Wide-base caster forks engineered to carry heavier loads without adding dead weight to equipment. Available in identical pairs in a wide range of sizes.

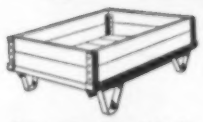
SEND FOR CATALOG . . . DEPT. 4

THE GENERAL TIRE & RUBBER CO. AKRON, O.

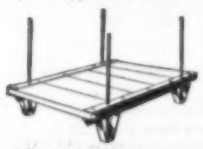
▲ For more details circle NED-189 J3 on enclosed inquiry slip ▲

5 capacities.
Husky, rigid, long lasting

BARRETT STEELEG SKIDS
Platform • Box • Stake Types
BUILT TO LAST



Barrett Box-Top Skid for bulk loading. Can be nested. Various heights. Special types available.



Barrett Stake Skid for pipe, lumber, steel bar stock. Stakes removable.

Barrett Skids are built to take heavy, slam-bang abuse year after year. High carbon manganese steel angles (50% stronger than mild steel) prevent deflection . . . no sagging skids to hamper lift-truck operations. Iron-bound hardwood top boards. All parts easily replaceable. Forged steel legs. Broad bearing surface protects floors. Any size, any capacity for hand or electric lift-truck operation. *For complete details get Bulletin 4882.*

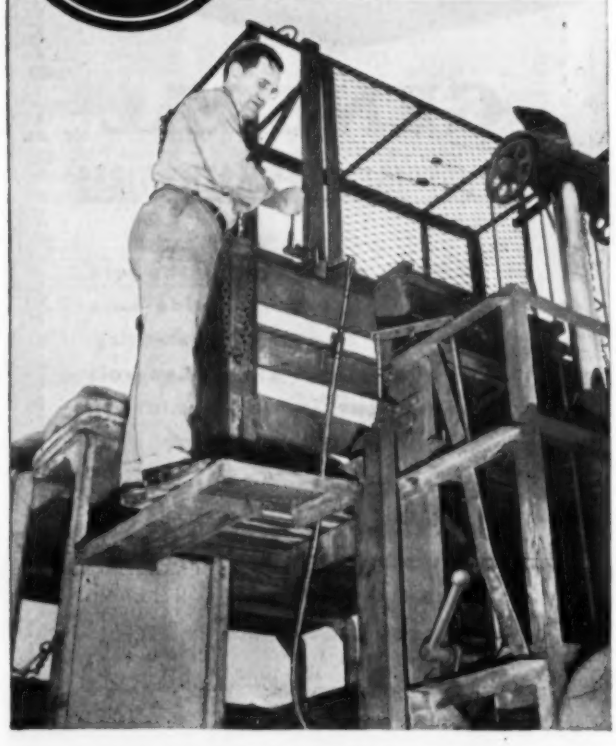
BARRETT-CRAVENS COMPANY
4623 S. Western Blvd., Chicago 9, Ill.
Representatives in All Principal Cities.
Canadian Licensee: S. A. Armstrong, Ltd., Toronto, Can.

BARRETT
One man does more than 3 or 4...with a Barrett

▲ For more details circle **NED-190 J3** on enclosed inquiry slip ▲

an **ACCO** product

TRU-LAY *PUSH-PULL* CONTROLS



TRU-LAY Push-Pull Operates Ice Truck Elevator

• Man climbs aboard elevator, throws Push-Pull control lever, and elevator lifts block of ice to desired height. Pulling lever back to neutral stops elevator. Pushing in opposite direction lowers the elevator by bleeding hydraulic cylinder.

TRU-LAY Push-Pulls snake around obstructions, and provide positive remote action over short or long distances. They can even be used on shakers as they operate while flexing. Capacities up to 1000 pounds input.

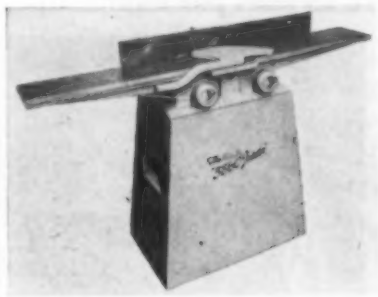
If you have a remote control problem write our Detroit office today for a copy of DH-287

TRU-LAY *PUSH-PULL* CONTROLS

ACCO
AUTOMOTIVE AND AIRCRAFT DIVISION
AMERICAN CHAIN & CABLE
601 Stephenson Bldg., Detroit 2
2475 Porter St., Los Angeles 21 • Bridgeport, Conn.

▲ For more details circle **NED-191 J3** on enclosed inquiry slip ▲

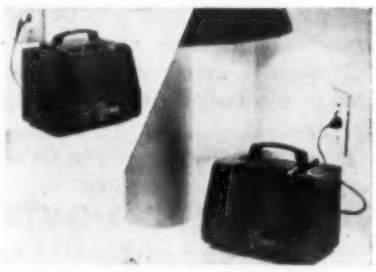
6-IN. JOINTER
floor model has three-knife head



Equipped with 60-in. long table and 37 x 4-in. fence, model 5860 jointer finishes up to 6-in. wide boards. Large handwheels with turning knobs which control the setting of each table are conveniently located at front of machine. Balanced 2⅞-in. diameter three-knife head operates at 6000 rpm on heavy duty life-sealed bearings. Rabbetting capacity is ⅝-in. with 8½-in. rabbetting arm extending 3 in. from bed. Made by **St. Paul Foundry & Mfg. Co.,** Heston & Anderson Div., 607 Kirkwood Ave., Fairfield, Iowa.

▲ For more details circle **NED-192 J3** on enclosed inquiry slip ▲

INTERCOMMUNICATION SYSTEM
plugs into lighting circuits



Electronic circuit which provides faithful voice and tone reproduction, noise - suppressing circuit and elimination of need for third or ground wire connection are improvements that have been incorporated in standard model CC-20(D) and long range model CC-45 Vocatron wire-less intercommunication units. Weighing only 4 lb, units are portable and plug into any standard lighting outlet. They operate on 105-125-v ac or dc. Made by **Vocaline Co. of America, Inc.,** 622 Vocaline Bldg., Old Saybrook, Conn.

▲ For more details circle **NED-193 J3** on enclosed inquiry slip ▲

CLERICAL POSTURE CHAIR
designed for comfort of user

Incorporating comfort features of previously announced executive models, No. 1008 clerical posture chair is upholstered in wide range of fabrics. It also features a foam rubber seat and back. Back is of hairpin design, and the heights of the back and chair are easily adjusted to suit user. Exposed metal parts are satin-finished anodized aluminum. Made by **Emeco Corp.,** Hanover 2, Pa.

▲ For more details circle **NED-194 J3** on enclosed inquiry slip ▲

BRAZING BOATS and TRAYS

For faster, dependable brazing with fewer rejects, hold parts or assemblies firmly in place on specially designed boats or trays of Stackpole carbon. Almost any desired shape or size can be supplied. Brazing alloys will not stick to them. Stackpole carbon supporting fixtures withstand severe thermal shock, permitting quick cooling and assuring exceptionally long life.

Write on letterhead for Catalog 40A.

STACKPOLE
STACKPOLE CARBON COMPANY, *St. Marys, Pa.*
EVERYTHING IN CARBON BUT DIAMONDS

▲ For more details circle **NED-195 J3** on enclosed inquiry slip ▲

Sort Out Your Sizes MECHANICALLY and ACCURATELY

MIGHTY-MITE
LIGHT DUTY VIBRATING SCREENS

ACCURATE—EFFICIENT—SAVES TIME
Now, you can screen, size, sort out or reclaim fine or coarse materials up to 15 tons per hour with Mighty-Mite. Hundreds in use. Send for literature today.

SCREEN EQUIPMENT CO., INC.
1750 WALDEN AVE., BUFFALO 25, NEW YORK

▲ For more details circle **NED-196 J3** on enclosed inquiry slip ▲

MAKE *FAST* PERMANENT REPAIRS ON LEAKING FAUCETS, VALVES

REPLACE Worn Seats with Endurable Bronze in a few minutes, STOP WASTE...SAVE MONEY

With an Economy Kit, you can replace worn and cut seats on valves, faucets and bibbs for a few cents—stop leaks for good. Simple—easy to use—Economy Kits and Seats permit *professional* repairs—and waste permanently. Your money back if not satisfied. Write for illustrated circular and price list.

***Economy* VALVE SEAT CO.**
1432 N. Keating Ave. Chicago 51, Illinois

▲ For more details circle **NED-197 J3** on enclosed inquiry slip ▲

FORT WORTH QD *Roller Chain* **SPROCKETS** WITH TAPERED SPLIT HUB
PATENT APPLIED FOR

ELIMINATE REBORING!

SAME HUB FITS "QD" V-BELT SHEAVE
Speed changes are simplified and "spare" sprockets can be carried more easily.
If your favorite distributor doesn't stock this new item, tell him about it. He'll reward you with better service.

"OFF THE SHELF" SERVICE AVAILABLE FROM INDUSTRIAL DISTRIBUTORS

Reboring of stock bore sprockets to fit various shafts is eliminated due to the various bores available in the QD hub. Installation and removal from the shaft is made easy by the tapered fit of the hub and sprocket. Hub assembly grips the shaft equivalent to a "press fit."

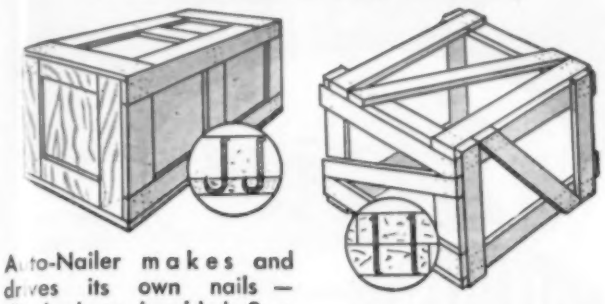
Catalog explaining additional advantages and construction details will be furnished on request.

OTHER FORT WORTH PRODUCTS
V-BELT DRIVES
SCREW CONVEYORS and ACCESSORIES
SCREW ELEVATORS
INDUSTRIAL FANS

FORT WORTH *STEEL AND MACHINERY CO*
Dept. 229, 3600 McCart, Ft. Worth, Tex.

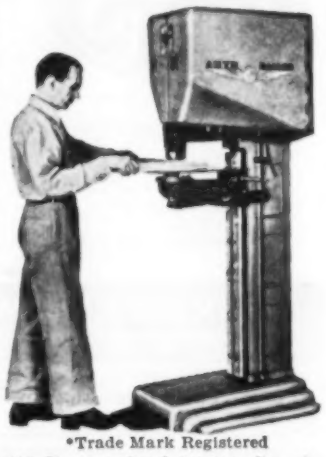
▲ For more details circle **NED-198 J3** on enclosed inquiry slip ▲

IT'S A CINCH TO CLINCH WITH AUTO-NAILER*



Auto-Nailer makes and drives its own nails — clinched or bradded—3 a second. No jigs necessary; will nail any pattern. Auto-Nailer is flexible: changing from one size or design to another requires no machine adjustment.

Autonails reduce nail costs. Use only length that's needed. None bent or lost. Shooks are auto-nailed under 1000 lbs. pressure. Even knots are nailed in stride. Write today for free catalog.



AUTO-NAILER CO.
269 MARIETTA ST., N.W., ATLANTA 3, GA.

*Trade Mark Registered

▲ For more details circle **NED-199 J3** on enclosed inquiry slip ▲

TRANSPORTS AND PILES THEM HIGH

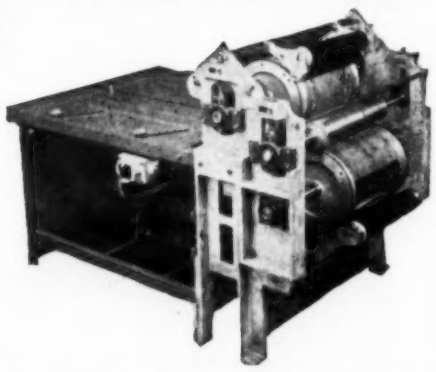
Large loads are handled speedily and without concern for aisle clearance or floor conditions with this motor-driven tote box grab and Cleveland Tramrail overhead rail system. Boxes are picked up, delivered and stacked by the cab operator, alone, with controls in the cab.

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6623 East 285th St., Wickliffe, Ohio

CLEVELAND TRAMRAIL

▲ For more details circle **NED-200 J3** on enclosed inquiry slip ▲

PRINT YOUR OWN SHIPPING CONTAINERS OR MULTI-WALL BAGS as You need THEM



Industrial's Auto Printer

is suitable for imprinting information, addresses, marking, or whatever you may require on your containers or multi-wall bags. It is capable of printing as many as 2000 units per hour. Eliminates hand stenciling.

This is just one of Industrial's coding and marking machines designed specifically for your needs to assure more efficient marking and movement of materials on production lines. Marking equipment is also available for conveyor line use.

Let us help you—send us your marking problem; we will do the rest.

Machines available for munitions marking.

Write for catalog today.

INDUSTRIAL MARKING EQUIPMENT CO.
Designers and Builders of Marking Equipment for Industry
Dept. NED, 454 Baltic Street, Brooklyn 17, N. Y.

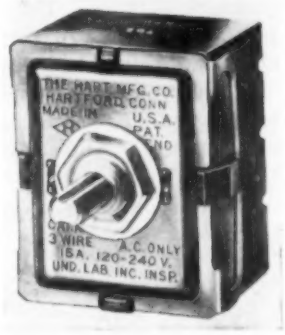
▲ For more details circle **NED-201 J3** on enclosed inquiry slip ▲

FORMING ROLLERS
six models give wide range, capacity

Six hand-operated rollers have been added to the Di-Acro line, having a material capacity ranging from 16 to 24 gage sheet steel, forming width range of 12 to 42 in., and radius capacity from 2 in. to infinity. They incorporate a cam-idler feature making it possible to form cylinders of any diameter in two passes, while cylinders of approximately the same diameter of the rolls can be formed in one pass. Bends can also be located in any position along the work since the material can be fed without bending until the cam is engaged. This makes possible the fabrication of rectangles and a wide variety of shapes with straight sections on both sides of the bend. Round, flat, and square stock and other ductile materials can also be worked. Made by **O'Neil-Irwin Mfg. Co.**, 582 Eighth Ave., Lake City, Minn.

▲ For more details circle **NED-202 J3** on enclosed inquiry slip ▲

MOTOR REVERSING SWITCH
has automatic lock connection



Instant, positive hook-up without binding screws or extra clips is provided by Auto-lock connections in this Diamond H model motor reversing switch. Stripped end of solid or stranded standard wire is simply pushed into the connection. Depressing small lever gives instant release. This two-pole switch is rated 1 hp at 120 v and 2 hp at 240 v ac and is designed for appiiances, air conditioners, workshop power tools and similar applications involving a single-phase motor whose direction must be reversed. It measures 1 21/32 x 1 27/32 x 1 7/32 in. and is available with or without housing and with lever, pointer dial or other type handles. Made by **Hart Mfg. Co.**, Dept. N, 110 Bartholomew Ave., Hartford, Conn.

▲ For more details circle **NED-203 J3** on enclosed inquiry slip ▲

DO YOU KNOW? Martin Hardcoat or Alcoa Hardcoat is a process for making the surface of aluminum file-hard and more resistant to wear than chromium plating or hardened steel. Extensively used in aircraft industry, process is now available to general industry. Service is offered by Pyrene Mfg. Co., Metal Finishing Div., 10 Empire St., Newark, N. J.

▲ For more details circle **NED-204 J3** on enclosed inquiry slip ▲

HERE'S ONE MAINTENANCE EXPENSE YOU CAN CUT with 75%

WILSHIRE
POWER SWEEPERS

WILSHIRE Power Sweepers cut sweeping costs as much as 75% . . . but that isn't all! They keep floors brighter and cut scouring and scrubbing costs. And because they pick up dust as well as debris they help to keep walls, windows, lighting fixtures, machinery and merchandise cleaner. They pay for themselves in 6 months or less . . . and we can prove it.

WILSHIRE POWER SWEEPER CO.
526 W. Chevy Chase Drive, Glendale 4, Calif.
WRITE FOR DETAILS

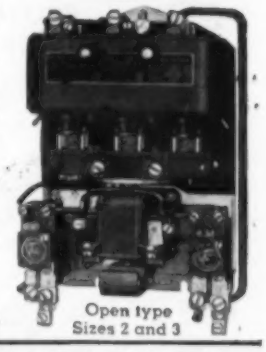
▲ For more details circle **NED-205 J3** on enclosed inquiry slip ▲

CLARK type "CY"

AC MAGNETIC MOTOR STARTERS
now available in
DUST-TIGHT ENCLOSURES

The sensational new CLARK Type "CY" motor starters are offered in a wide variety of types and enclosures for use in such industrial atmospheres as hazardous gas, dust or excessive humidity. Illustrated is the NEMA Type V Dust-Tight, Fabricated Steel Enclosure —with gasket and wing nuts. This is available for sizes 0, 1 and 2.

CLARK Type "CY" starters, sizes 2 and 3, have an entirely new arc-quenching principle which greatly increases contact life, by a constant rotation of the arc on contact surfaces.



Open type Sizes 2 and 3

Write for descriptive literature.

THE CLARK CONTROLLER CO.
ENGINEERED ELECTRICAL CONTROL • 1146 EAST 152ND STREET, CLEVELAND 10, OHIO

▲ For more details circle **NED-206 J3** on enclosed inquiry slip ▲

A GREAT NAME

—in Industrial Tires, Too

USERS of Industrial Tires, too, have learned to depend on "The Greatest Name in Rubber" to supply their Industrial Tire needs.

Goodyear Industrial Tires are engineered to cut tire costs by delivering longer trouble-free service.

Illustrated: Goodyear's famous Xtra Cushion ALL SERVICE Industrial Tire—one of the many sizes and types that enable Goodyear to supply you with the right tire for every Industrial need.

Goodyear will be glad to send a fully qualified technical expert to your plant—to analyze your operation and to recommend the right Industrial Tire for your operating conditions. This service is yours for the asking. Please write: Goodyear, Industrial Tire Sales, Akron 16, Ohio.

All Service—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

GOODYEAR
INDUSTRIAL TIRES

▲ For more details circle **NED-207 J3** on enclosed inquiry slip ▲

BIG NEWS!

Both *Inch-Pound* and Foot-Pound Models of Amazing PROTO Torquer Now Available!

Announced in January! Over 30,000 bought by March 31!! That's the whirlwind success story of the sensational PROTO torque-*limiting* wrench. In addition to foot-pound models, you can now buy *inch-pound* styles and these handle thousands of jobs. Buy the model you prefer from your PROTO dealer today! Send 10¢ for 68-page catalog of entire line to

PLOMB TOOL COMPANY
2275Z Santa Fe Avenue
Los Angeles 54, Calif.

Fastest Torquer in the World!
* Automatic Torque-Limiting Release
* NO Dials, Scales or Pointers to Watch or Break
* Ratchet Head Models Save Time
* Accurate Micrometer-Type Adjustment
* Trouble-Free Construction

5383

Eastern Factory: Jamestown, N.Y.
Canadian Factory: London, Ont.

PROTO TOOLS
PROTO means PROfessional TOols

▲ For more details circle **NED-217 J3** on enclosed inquiry slip ▲

COME *Clean with a* Clarke

Thirty-five years of Clarke know-how are built into Clarke floor maintenance machines to do your cleaning easier, faster and better. A Clarke does the job month after month without repair expense because it's job-designed and built for years of rugged service. That's why you should investigate Clarke before you consider any other floor maintenance equipment.

WD-23 WET-DRY VACUUM

No cleaning job — wet or dry — is too big for the WD-23 Wet-Dry Vacuum. Heavy porcelainized tank, inside and out, resists rust. Handy dump valve eliminates heavy lifting. Handy attachments available. Model WD-15 for smaller area jobs.

P-17 FLOOR MAINTAINER
(With Water Tank Attachment)

Scrubbing a floor spotlessly clean is no chore for this Clarke P-17 floor maintainer (shown with water tank attachment, available at slight extra cost). Works easily on any type floor.

Clarke SANDING MACHINE COMPANY
229 East Clay Avenue, Muskegon, Mich.
Authorized Sales and Service in Principal Cities

SEND TODAY!

Send this coupon for full, colorful details on Clarke floor maintenance equipment that will save you working time — and money.

Clarke Sanding Machine Company
229 East Clay Avenue, Muskegon, Michigan

Please send me full details on Clarke equipment and the name of my nearest dealer.

NAME_____
ADDRESS_____
CITY_____ ZONE____ STATE____

▲ For more details circle **NED-218 J3** on enclosed inquiry slip ▲

SOLENOID VALVE
major parts are stainless steel

Made without gaskets, this 5-oz solenoid valve has its major parts made of stainless steel, silver brazed for rigidity. Floating synthetic rubber needle valve insures positive closing at zero pressure. Standard models have 1/16-in. orifice. Valve can operate up to 1000 cycles per minute at a pressure up to 200 psi. Flow is straight-through. Voltages offered are 6, 12 and 24 v dc and 100 v ac, with special voltages on request. Made by **Specialty Products Co.**, Dept. A, 3725 Monitor Ave., Minneapolis 16, Minn.

▲ For more details circle **NED-219 J3** on enclosed inquiry slip ▲

RUBBER & PLASTIC MATERIALS
for various industrial applications

Developed for various chemical, electrical and mechanical applications, Ace-Flex, Ace-Riviclor and Dur-Ace are rubber and plastic materials. Ace-Flex is a tough and flexible light-weight plastic with good electrical properties and chemical resistance. It is nontoxic, can be sterilized and is available as flexible tubing and sheet. Riviclor is an unplasticized thermoplastic with high chemical resistance, high impact strength and good fabricating characteristics. Dur-Ace is a thermoplastic multipolymer with high impact strength, dimensional stability and chemical resistance. Typical application for the compounds include valve parts, tank linings, corrosion-resistance pipe and laboratory service lines. Made by **American Hard Rubber Co.**, Dept. NED, 93 Worth St., New York 13, N. Y.

▲ For more details circle **NED-220 J3** on enclosed inquiry slip ▲

TIME SWITCH
handles up to 30-amp 120 or 240 v

Replacing present 300 series unit, Memory Master 3000 series time switch has attractive easily-read day-night dial. Dial trippers need only be loosened slightly for resetting. Additional trippers can be added without removing the dial to provide up to 16 operations in a 24-hour period. Torsion clutch permits free movement of dial for manual check of the "on-off" switching operations. Designed for simplified servicing, unit is housed in gray 18-page drawn steel case. It is UL-approved for 30 amp at 120 or 240 v. Made by **Paragon Electric Co.**, Dept. NED, Two Rivers, Wis.

▲ For more details circle **NED-221 J3** on enclosed inquiry slip ▲

WRITE YOUR OWN TICKET FOR

Quality Wire!

SPECIFY SENECA FOR WIDE RANGE OF USES

- ☐ Aircraft
- ☐ Armature
- ☐ Cable
- ☐ Car Seal
- ☐ Cotter Pin
- ☐ Curtain Spring
- ☐ Flexible Shaft
- ☐ Glass Netting
- ☐ Hair Pin
- ☐ Lock Spring
- ☐ Piston Ring
- ☐ Plow Steel
- ☐ Ring Traveler
- ☐ Rope
- ☐ Spark Coil Core
- ☐ Spring
- ☐ Stapling
- ☐ Stitching
- ☐ Weaving

Whatever your needs in wire . . . specify SENECA for *top quality* and *uniformity!* High or low carbon steel wire . . . aluminum . . . bronze. Sizes No. 40 W & M (.007) and larger . . . round, half round, oval, square, flat, straightened and cut. Finishes—bright, soft annealed, coppered, liquor, tinned, bright galvanized, oil tempered, enameled. Write about your requirements.

SENECA WIRE & MANUFACTURING COMPANY, FOSTORIA, OHIO
Representatives in practically All Principal Cities

▲ For more details circle **NED-222 J3** on enclosed inquiry slip ▲

HERE IS A COMPACT DURABLE CHEMICAL TRANSFER PUMP FOR HANDLING PROCESS LIQUIDS

HIGH QUALITY
EASILY SERVICED

PEERLESS TYPE CTB PUMP

PEERLESS PUMPS

TYPE CTB CHARACTERISTICS
HEADS: 10-140 ft.
CAPACITIES: 10-250 gpm
HP RANGE: 1-10 hp
LIQUID TEMPERATURE: up to 250° F

Liquid End Made of Type #20 Stainless Steel Alloy

Handles corrosive and abrasive liquids at moderate temperatures and pressures. Write today for Peerless pump Bulletin No. B-1606. Profusely illustrated with pump views, sectional drawings, elevations and dimensions. Contains complete head-capacity data and details of Peerless construction.

PEERLESS PUMP DIVISION
FOOD MACHINERY AND CHEMICAL CORPORATION
Los Angeles 31, California and Indianapolis 8, Indiana
Offices: New York, Chicago, St. Louis, Atlanta; Dallas, Plainview and Lubbock, Texas, Fresno, Los Angeles; Phoenix; Albuquerque, N. M.; Tulsa

▲ For more details circle **NED-223 J3** on enclosed inquiry slip ▲

4 WAY MIXING ACTION PRODUCES HOMOGENEOUS BLENDS... Reduces Mixing Costs —

with the
STURTEVANT BLENDER

Four separate mixing actions in the Sturtevant Blender assure complete blending of various materials regardless of weights, densities, finenesses, or other physical properties.

This mixing action provides a thoroughly blended product with no substances floating to remain unmixed.

Sturtevant Blenders are available in mixing capacities from 500 to 20,000 pounds. Write for information or engineering assistance.

STURTEVANT MILL COMPANY
114 CLAYTON STREET, BOSTON 22, MASSACHUSETTS
Designers and Manufacturers of
CRUSHERS • GRINDERS • SEPARATORS • CONVEYORS • MECHANICAL DENS and EXCAVATORS • ELEVATORS • MIXERS

▲ For more details circle **NED-224 J3** on enclosed inquiry slip ▲

Precision Quality
STAINLESS SET SCREWS
18-8 and type 316 . . .
IN STOCK

Stainless Steel Set Screws of all types, in all standard sizes, lengths, and points, *in stock*, ready for immediate shipment to you. What do you need? Socket Set? Slotted or Square Head Set? We have them. We can fill rush orders for them — and for Socket Head Cap Screws, Flat Head Socket Caps, and many other stainless fasteners. Specials made promptly.

Find out how many of your needs we can satisfy. Write, on your letterhead, for our new, 96-page catalog No. L.

STAINLESS SOCKET FASTENERS
MANUFACTURERS SINCE 1929
ALLMETAL
SCREW PRODUCTS COMPANY, INC.
821 STEWART AVE., GARDEN CITY, L. I., N. Y.

▲ For more details circle **NED-225 J3** on enclosed inquiry slip ▲

HERE'S WHY

PRESTOWELD
Trade-Mark

BLOWPIPES COST SO LITTLE TO USE AND MAINTAIN

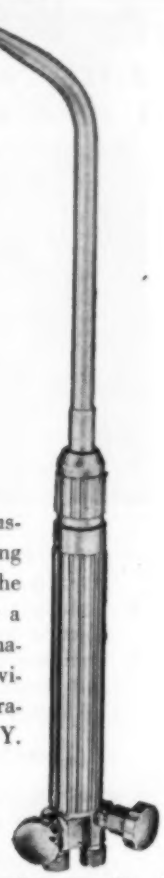
SELF-SEATING VALVES
Reseat scored valves when turned tight.

RUGGED HANDLE ASSEMBLY
Built for long, trouble-free service.

SLIP-FIT "O" RINGS
Perfect gas seals every time.

MIXER IN EACH HEAD
Resists backfires, eliminates burnouts.

SWAGED, PURE COPPER TIPS
Heads snap in handle. No wrench needed.



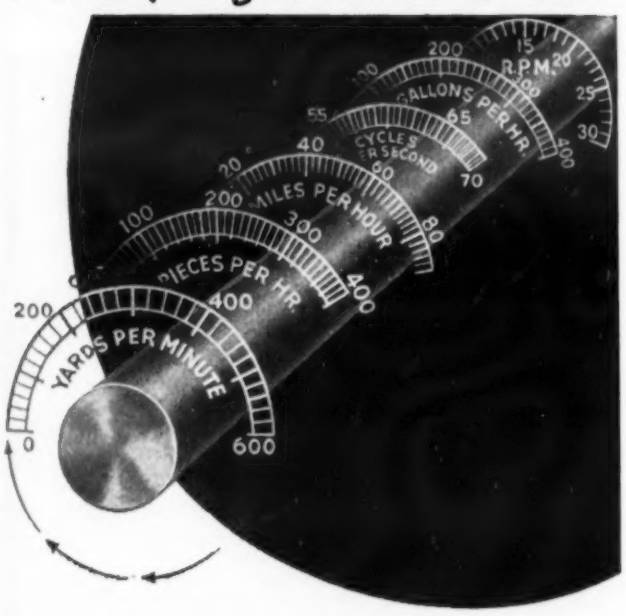
The PREST-O-WELD W-122 blowpipe (illustrated) is available with 13 standard welding heads and 3 multiflame heating heads, all of the snap-in type. Ask your LINDE jobber for a demonstration or write for further information. LINDE AIR PRODUCTS COMPANY, a Division of Union Carbide and Carbon Corporation, 30 E. 42nd St., New York 17, N. Y.

get it from your LINDE jobber

The terms "Linde" and "Prest-O-Weld" are registered trade-marks of Union Carbide and Carbon Corporation.

For more details circle NED-226 J3 on enclosed inquiry slip

If some part goes 'round and 'round



...WESTON
Electrical Tachometers

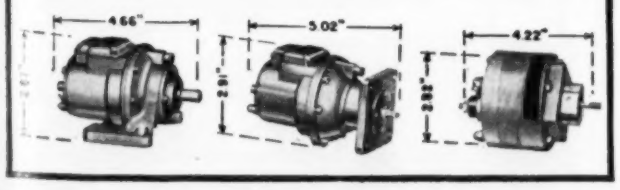
can provide a simple, accurate key to control!

Wherever instant, accurate measurement furnishes the key to precise control, equipment manufacturers now build-in WESTON Electrical Tachometers. For no other method approaches the electrical tachometer for simplicity, ease of installation, overall dependability and ready adaptability to problems of design.

The specially designed WESTON A-C and D-C Tachometer Generators, for example, save up to 50% in size and weight, and are available in forms to permit wide flexibility in mounting, and in connection arrangements. The WESTON Indicators, too, are available in required sizes and shapes, calibrated in any function of the RPM. Available to directly indicate speeds as low as 1/10 RPM up to 80,000 RPM.

Other advantages of electrical tachometers such as . . . multiple indications from one generator . . . remote indications . . . dependable, long-term accuracy . . . and low maintenance, warrant full investigation. Complete details gladly sent on request. WESTON Electrical Instrument Corporation, 614 Frelinghuysen Ave., Newark 5, N. J.

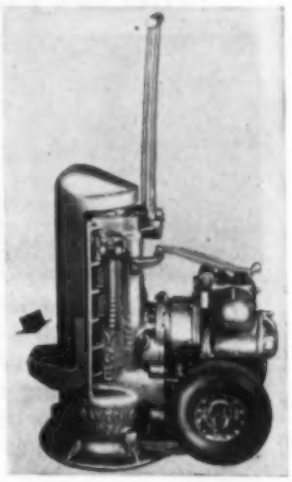
Space-saving • Weight-saving WESTON Generators



WESTON *Instruments*

For more details circle NED-227 J3 on enclosed inquiry slip

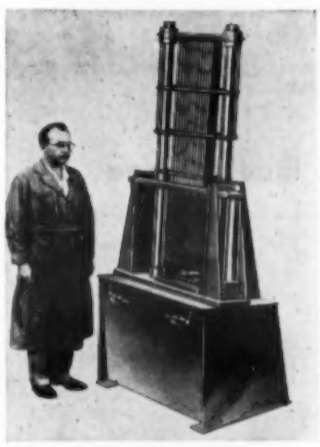
HEAVY-DUTY JACK
100-ton unit driven by air motor



Of the ball-bearing geared screw type, this 100-ton capacity jack is powered by a 5-hp rotary air motor and can be trundled around on its semipneumatic tired wheels. It is fitted with a Toe-Lift adaptor (platform shown by arrow in illustration) and in this form will pick up a 75-ton load from 9 in. above the floor and lift it a total distance of 13¾ in. This accessory can be quickly removed to give the full 100-ton capacity on top of the ram. Unit features automatic shut-off at upper and lower ram travel limits, together with a massive stabilizing base. Made by **Joyce-Cridland Co.**, 2200 E. First St., Dayton 3, O.

For more details circle NED-228 J3 on enclosed inquiry slip

TUBE EXPANDING MACHINE
used for copper tubing in condenser coil assemblies



This manually controlled vertical tube expanding machine is particularly adapted to expansion and sizing of copper tubing in evaporator and condenser coil assemblies. Mandrels on model illustrated are mounted on 1-in. centers and expand sixty ⅜-in. diameter copper tubes 0.020-in. to provide thermal-conducting, mechanical joints between tubing and stack of cooling fins. Another set of 60 mandrels, through which expanding mandrels feed, are picked up near end of downfeed to size ends of tubing for soldered return bend fittings by expanding them additional 0.026 in. Complete cycle time is 40 seconds.

Two hydraulic cylinders in base control mandrel feed and return functions through two draw rods. Steel-nosed expanding mandrels are supported by retaining plates guided on draw rods and stack up as mandrels are fed to depth. Shorter sizing mandrels are supported by mounting plate, also guided on draw rods. Separate hydraulic pump and tank unit driven by 15-hp motor provides 20 gpm of oil for actuating hydraulic cylinders. Machines are built in variety of sizes, including completely automatic types, by **Walter P. Hill, Inc.**, Dept. 1, 22183 Telegraph Rd., Detroit 19, Mich.

For more details circle NED-229 J3 on enclosed inquiry slip

HE CAN SHOW YOU HOW TO SAVE TIME AND MONEY

The man who uses brushes in his daily work knows the best when he sees it . . . he just looks for the name "OSBORN". His quick "OK" can be your clue to important savings in purchasing time and cost. All you need to do is put the name "OSBORN" on your order cards.

You can buy OSBORN Brushes *automatically* with confidence because their workmanship and materials are backed by 61 years of OSBORN service to Industry. Accepted as the standard of quality today, Osborn Brushes are stocked by leading Industrial Distributors in your area. *The Osborn Manufacturing Co., Dept. Z-9, 5401 Hamilton Ave., Cleveland 14, Ohio.*

Write for free Handy Catalog. Simplifies specifying of Osborn maintenance and paint brushes.

Osborn Brushes

OSBORN POWER, MAINTENANCE AND PAINT BRUSHES AND FOUNDRY MOLDING MACHINES

For more details circle NED-230 J3 on enclosed inquiry slip

For more details circle NED-231 J3 on enclosed inquiry slip

Get Wide Selection!

Whether you need open, drawout, or stationary enclosed units . . . with remote or local switching . . . there's an Allis-Chalmers low voltage air breaker for the job. These breakers are insensitive to shock and vibration under normal conditions and can be applied in any location.

Ratings are available to meet all low voltage applications. Interrupting capacities 25,000 and 50,000 amperes; continuous currents 35 to 1600 amperes; maximum voltage 600 volts, 25 to 60 cycles.

Get complete specifications from an Allis-Chalmers district office, or write Allis-Chalmers, Milwaukee 1, Wis.

A-4121

ALLIS-CHALMERS

For more details circle NED-232 J3 on enclosed inquiry slip

IF YOU USE INDUSTRIAL FABRICS OR TAPES

You Should Have These

FLIGHTEX

SWATCH BOOKS

☐ GLASS ☐ COTTON
☐ VINYON ☐ DYNEL
☐ ORLON

Please send the swatch books checked.

NAME .....
FIRM .....
ADDRESS .....
CITY ..... STATE .....

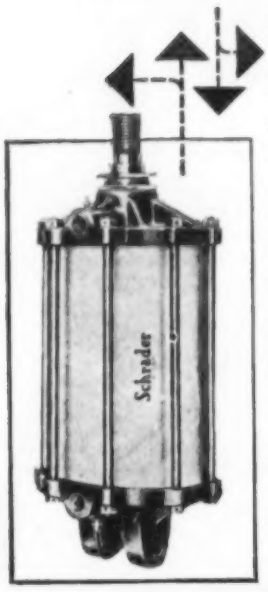
Our staff of engineers is at your service to help solve your fabric and tape problems.

FLIGHTEX FABRIC

FLIGHTEX FABRICS, INC.
91 WORTH STREET
New York 13, N. Y.

For more details circle NED-233 J3 on enclosed inquiry slip

Let Schrader Air Cylinders shoulder your work load



There are hundreds of places in your plant where you can speed up production and reduce fatigue. Look around—you can undoubtedly find many places where manual lifting, lowering, pushing or pulling is slowing up production. That's where you need Schrader Air cylinders.

Available for pushing, pulling, lowering or lifting—with or without cushion—Schrader Air Cylinders and Operating Valves are made in sizes and mountings to meet your needs. Write for the Schrader catalog, which gives a full description.

A. SCHRADER'S SON

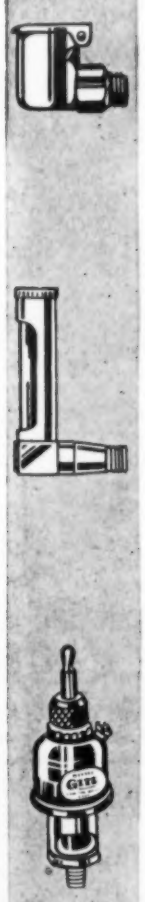
Division of Scovill Manufacturing Company, Incorporated

459 Vanderbilt Ave. Dept. E-43 Brooklyn 38, N. Y.

For more details circle NED-234 J3 on enclosed inquiry slip

Look To The Leader For Lubricating Devices

GITS



40 Years' Leadership

Yes, for 40 years GITS has been setting the standard for industry... solving tough lubricating problems... earning the confidence of manufacturers . . . it's the reason people say, "Call GITS first".

Low Cost

Yes, GITS oil cups can do a complete lubricating job for you . . . prolonging bearing life, reducing maintenance costs, cutting down-time, boosting production... and GITS oil cups cost so little.

World's Largest Selection

Yes, only GITS can offer you such a wide range of standard stock sizes. From *just one* source you can get *all* lubrication devices in *any design* for *any purpose.*

Consistent Top Quality

Yes, GITS is known for uniform quality in design, materials and machining . . . this means constant, dependable performance for you. Inferior products can cost you time and money. Demand the best ...get GITS.

Write Today for **FREE CATALOG** *No. 60A Use it as your handy reference for lubricating devices*

Oil Hole Covers, Oil Cups, Grease Cups, Bottle Oilers, Gauges, Gravity-Feed, Wick-Feed, Constant Level, Vibrating Rod Styles. Threaded or Drive-Type, Elbow or Straight.

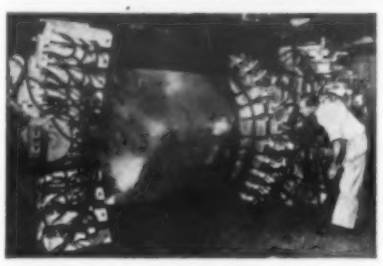
GITS BROS. MFG. CO.

1833 S. Kilbourn Ave. Chicago 23, Ill.

For more details circle NED-235 J3 on enclosed inquiry slip

FLEXIBLE FORMING JAWS

for sheet stretch-forming operations offer new possibilities and economies



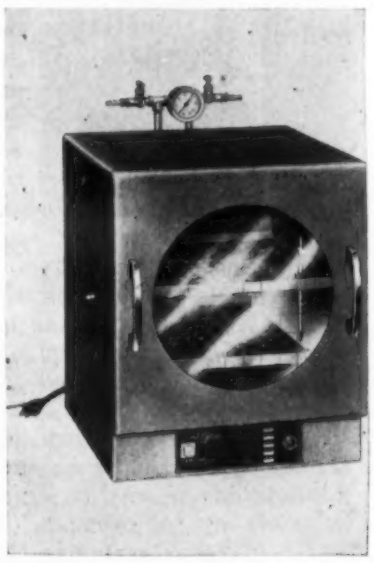
For use on all types of sheet stretch-forming equipment, Hydra-Curve segmented jaws grip and curve the sheet to the die cross-section, preliminary to the actual stretch forming which completes longitudinal curves. This technique saves up to 30 per cent of material normally allowed beyond the die for transitional stresses, cuts down wrinkling and permits formation of very deep curves. Also, since stresses are lower, many aluminum parts can be worked in the standard temper condition.

Jaws are composed of many segments hinged together by pivot pins each having hydraulically operated grippers. Curvature is established by set screws acting as adjustable stops in front of and behind each segment. Wide variety of curvatures including half round, S-shapes, and convex and concave forms are obtainable. Jaws are loaded in the straight line position, and the sheet can be curved before or during actual stretch-forming as desired. Made by **Hufford Machine Works, Inc.,** 1701 E. Grand Ave., El Segundo, Calif.

For more details circle NED-236 J3 on enclosed inquiry slip

VACUUM OVEN

has 228 sq in. loading area



Usable for drying under either vacuum or standard atmospheric conditions, Duo-Vac oven has range from room temperature to 125° C. An 11-in. diameter safety glass front window gives full visibility, and the door is specially gasketed to give vacuum seal without clamps. Vacuum chamber is fabricated from seamless drawn aluminum, and is insulated by glass fiber and fitted with two shelves. Unit is fitted with internal thermometer, external vacuum gage and connectors, while temperature control is accurate to plus or minus ½° C at all settings. Heating is by electric element. Made by **Labline, Inc.,** 219 N. Desplaines St., Chicago 6, Ill.

For more details circle NED-237 J3 on enclosed inquiry slip

For specifications and prices on the complete line of Ballymore Safety Step Ladders, send for free catalog. Ballymore Company, Wayne 3, Pa.

Ballymore SAFETY LADDERS

BALLYMORE SAFETY STEP LADDERS

For more details circle NED-238 J3 on enclosed inquiry slip

the NEW SUPER Handy Sandy

FILLS LARGE FLASKS IN SECONDS TO GIVE YOU SUPER SAVINGS

Close-up view of a Super Handy Sandy with Twin Hoppers for supplying two molding stations in a nationally known foundry

- Multiplies the output of molders.
- Handles up to 40 tons of sand per hour.
- Eliminates shoveling and waste motions for the molder.
- Increased production 150% on large molds in test installation.
- Provides low cost mechanization that can be paid for out of savings.

write for descriptive literature

NEWAYGO ENGINEERING COMPANY

Newaygo, Michigan

For more details circle NED-239 J3 on enclosed inquiry slip

3 Complete Lines

OF

TRUMBULL SAFETY SWITCHES

The Trumbull trade mark on any switch means top quality in its class. Now the three styles described below make it easier than ever to be sure you get the best buy for your requirements in any application up to 200 amperes, 600 volts AC or DC.

Heavy Duty Industrial: Trumbull Style HCI Front Operated Safety Switches exceed NEMA Type A Standards, are deliberately designed and built to meet today's heavy industrial requirements. Unsurpassed for ease of installation, operating and maintenance advantages, and safety features.

Standard Duty: Trumbull Style HCI Side Operated Safety Switches meet NEMA Type A Standards, will serve most applications with plenty to spare.

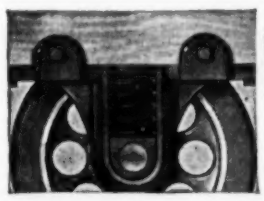
General Use: Trumbull Style D Safety Switches meet NEMA Type D Standards, are designed for distribution and branch circuits, service entrance, and other jobs where service is not severe.

See your Trumbull Distributor or write direct for Bulletins.

TRUMBULL ELECTRIC

DEPARTMENT OF GENERAL ELECTRIC COMPANY
PLAINVILLE, CONN.

For more details circle NED-240 J3 on enclosed inquiry slip



PRODUCT SAVER
MAN SAVER
FLOOR SAVER

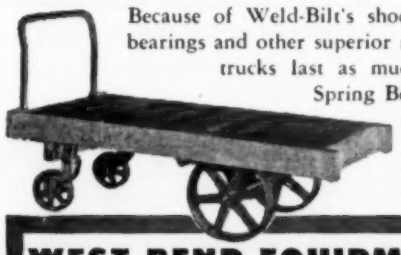
Special tempered spiral springs keep load level while absorbing shocks of an uneven floor.

Weld-Bilt

SPRING BEARING TRUCKS

Here's the answer to your problem of moving materials more efficiently, with maximum protection to product, trucker and floor.

On Weld-Bilt Spring Bearing trucks, your materials move without jarring or vibration. Your truckers work faster and easier, with less fatigue. Floor drains and door sills are protected against damage, as wheels "step" over obstruction.



Because of Weld-Bilt's shock-absorbing spring bearings and other superior mechanical features, trucks last as much as 50% longer. Spring Bearings are featured on Weld-Bilt platform trucks of all styles and designs. Write for bulletin.

WEST BEND EQUIPMENT CORP.

MATERIALS HANDLING ENGINEERS

311 WATER STREET, WEST BEND, WISCONSIN

For more details circle NED-241 J3 on enclosed inquiry slip

AMPLICALL equips your business with a pressure-easing internal communication system. Its "clear line" facilities provide *2-second speech contact* within and between departments. AMPLICALL frees your busy switchboard for important outside calls—keeps personnel *on the job*—keeps talk terse—saves "waiting and walking" time. Today, more than ever, your business needs pressure-easing, time-saving AMPLICALL. There is a system to fit your special needs. Get the full facts today!

SEE YOUR PHONE BOOK
For your nearest AMPLICALL specialist, look under "Intercommunication" in your classified phone directory—or write direct for full information.

ELECTRONIC AMPLICALL INTERCOMMUNICATION

RAULAND-BORG CORPORATION
3523-D Addison St., Chicago 18, Ill.

For more details circle NED-242 J3 on enclosed inquiry slip

There's an OZALID Machine that matches YOUR needs!

The OZAMATIC. This streamlined, desk-top Ozalid machine makes copies up to 16" wide. With its maximum developing and printing speed of 30 ft. per minute, it can produce up to 1,000 letter-size copies per hour. Economical to buy and to operate.

The Ozalid Streamliner

This moderately priced machine makes copies up to 42" wide at 14 feet per minute. Occupies only 11 sq. ft. of floor space.

The Ozalid Super-B

Air-cooled model with automatic controls. Copies up to 42" wide at rate of 25 ft. per minute. Occupies 18 sq. ft. of floor space.

The Ozalid Printmaster

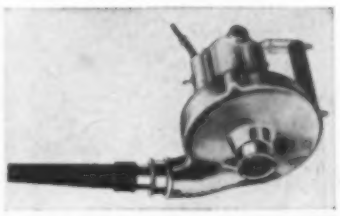
Accommodates materials up to 42" and 54" wide. Automatic stacking, front and rear delivery. Copying speeds up to 30 ft. per minute.

Cut Copying Costs . . . Use OZALID

Johnson City, N. Y.
A Division of General Aniline & Film Corporation
"From Research to Reality"
Ozalid in Canada—Hughes-Owens, Ltd., Montreal

For more details circle NED-243 J3 on enclosed inquiry slip

INDUSTRIAL BLOWER
heavy-duty unit is portable



Having a 1-hp universal heavy-duty motor, model 150 portable industrial blower produces an average maximum vacuum of 40.5 in. It will handle 220 cfm at a pressure of 28.6 in. Unit weighs 16 lb, and has a 20-ft three-wire rubber covered cord with grounding terminal. It can be installed for stationary dust disposal at grinders and polishing machines. Special tool kits for use with unit are a carrying kit, with shoulder strap, dirt bag and slide-brush; one to blow litter from inaccessible places; and one with nonconducting tools for cleaning electrical equipment. Unit gives either a blowing or a sucking action. Made by **Premier Co.,** Dept. KP, 754 Woodlawn Ave., St. Paul 1, Minn.

For more details circle NED-244 J3 on enclosed inquiry slip

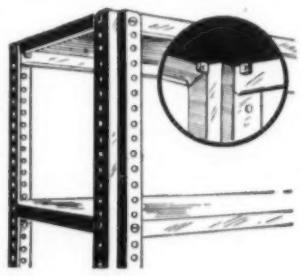
MAGNETIC HOLDER
adjustable for dial indicators

Developed for holding dial indicators, the Miti-Mite magnetic base holder is used by placing it against any round or flat iron or steel surface. Three models with permanent magnets are available: No. 100 with 50-lb pull and attachments; No. 101, with same pull, but extra fine adjustment feature and attachments; and No. 150, a heavy duty unit with 100-lb pull. Nearly all dial indicators can be held. Swivel action post is held in position by a knurled locknut, and adjustment is through friction joints. Distributed by **Lufkin Rule Co.,** Hess St., Saginaw, Mich.

For more details circle NED-245 J3 on enclosed inquiry slip

STEEL SHELVING
adjustable, has rigid corner design

Capable of handling heavy shelf loads, adjustable steel shelving has Twin-Post corner design giving the effective strength of two posts. Standard 16-gage posts range from 6 to 10-ft high, and 18 and 20-gage steel shelves are available in 25 sizes between 24 x 9 and 48 x 24 in. Standard finishes are grey or green baked enamel. Made by **Neubauer Manufacturing Co.,** 2003 Central Ave., Minneapolis 18, Minn.



For more details circle NED-246 J3 on enclosed inquiry slip

FOOTE BROS. SLOW SPEED LINE-O-POWER DRIVES

Equipped with DUTI-RATED LIFETIME GEARING

- For Horizontal or Vertical Applications
- In Straight Line *and* Right Angle Design
- Both Foot *and* Flange Mounted Units
- Rugged—Compact—Economical
- Ratios, Capacities for Heavy-Duty Use

This Trademark Stands for the Finest in Industrial Gearing

Foote Bros. Gear and Machine Corp.
Dept. N.E., 4545 S. Western Blvd.
Chicago 9, Illinois
Please send Line-O-Power Bulletins:
☐ Straight Line ☐ Right Angle
Name
Address
City State

For more details circle NED-247 J3 on enclosed inquiry slip

MEMO: Specify Cambridge Fabrications for—

DIPPING
Baskets, crates or racks for bulk cleaning, pickling or chemical treatment in any metal or alloy . . . single units or in quantity. Let us quote on your needs.

HEAT TREATING
Cambridge units for brazing, annealing, sintering and other heat treating processes have been used for years throughout industry. Our familiarity with heat treating operations assures your complete satisfaction with the units we build for you.

HANDLING
Let us go to work on your special materials handling fixtures. Send prints for quotation, or simply tell us the job you want done and our own engineers will develop designs for your approval.

HERE'S THE FULL STORY, FREE!

The Cambridge Wire Cloth Company
DEPARTMENT C
CAMBRIDGE 9, MARYLAND

WIRE CLOTH · METAL CONVEYOR BELTS · SPECIAL METAL FABRICATIONS

84 page catalog describes Cambridge facilities for fabricating special metal assemblies. Also contains useful metallurgical data. Write for your copy today.

Offices in Leading Industrial Cities
See "Baskets-Wire" in your classified telephone directory.

For more details circle NED-248 J3 on enclosed inquiry slip

NOW HUSKIER AND HANDIER for all types of soldering

INSTANT HEAT up to 275 Watts

Finest, fastest soldering tool you've ever seen—the new WELLER Electric Gun, completely redesigned and packed with features and power for every job.

Four models—single and dual heat light and heavy duty

• *Instantaneous thermostatic control* • *Full, constant heat* • *Perfect balance* • *Prefocused spotlights* • *Shatterproof housing* • *Low-cost, replaceable Soldering, Smoothing and Cutting tips* • *Longer reach*

Order from your Distributor or write for bulletin direct.

Better from Grip to Tip

Weller ELECTRIC GUNS

THE FINEST TOOLS FOR THE FINEST CRAFTSMAN

809 Packer Street, Easton, Pa.

For more details circle NED-249 J3 on enclosed inquiry slip

Pattern Shown ½ Actual Size

GET BOTH WITH A.W. SUPER-DIAMOND

Where safety *and* economy are important, choose A.W. SUPER-DIAMOND Floor Plate. No other flooring gives you more foot safety, ease of maintenance, durability—at such low cost!

SUPER-DIAMOND's exclusive, engineered raised-diamond pattern puts 40 anti-skid traction points in every footstep. SUPER-DIAMOND is easy to clean with hose, mop or broom—has no cracks or corners to catch and hold dirt. SUPER-DIAMOND withstands hard blows and heavy loads—resists heat, fire and most chemicals. And you get all these advantages at *no premium price.*

Learn the facts about SUPER-DIAMOND foot safety and economy today. Mail the coupon for our newest booklet on floor safety.

A.W. SUPER-DIAMOND
ROLLED STEEL FLOOR PLATE

ALAN WOOD STEEL COMPANY
CONSHOHOCKEN, PA.

Please send me, without charge, your latest booklet SD-44 on SUPER-DIAMOND safety.

Name
Company
Address *City* *State*

For more details circle NED-250 J3 on enclosed inquiry slip

ROLOCK
FABRICATED ALLOYS (HEAT AND CORROSION RESISTANT)

NEW and COMPLETE . . .

specialized reference on Pickling, Degreasing, Galvanizing and other processing operations. Baskets, Manual and Motor-powered Barrels . . . Trunnion, Centrifugal, Bottom-dumping Baskets, Shell Case containers.

• • •

Send for this No. B-9 Corrosion Resistant Section of Rolock's catalog . . . just off the press. It's full of valuable ideas.

11RL52R

ROLOCK, INC.
1412 KINGS HIGHWAY, FAIRFIELD, CONN.

For more details circle NED-251 J3 on enclosed inquiry slip

keep costs down

with accurate job time records

CALCULAGRAPH

FIGURES ELAPSED TIME ACCURATELY

PRINTS DATE
STARTING TIME
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TOTAL ELAPSED TIME

Keep production costs in line with automatically computed, precision Calculagraph job time records. Just stamp card at beginning and ending of the operation. Calculagraph prints date, starting and finishing time plus precision calculated elapsed time. One Calculagraph can record and compute job time data for one entire shop or department by handling any number of cards in any sequence. Accurate, printed Calculagraph records can be filed for future use in estimating on new orders and checking production efficiency. Calculagraphs are low in cost, practically maintenance-free and built for a lifetime of dependable service.

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Send complete data on Calculagraph to:

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COMPANY _____
STREET _____
CITY _____ STATE _____

For more details circle NED-252 J3 on enclosed inquiry slip

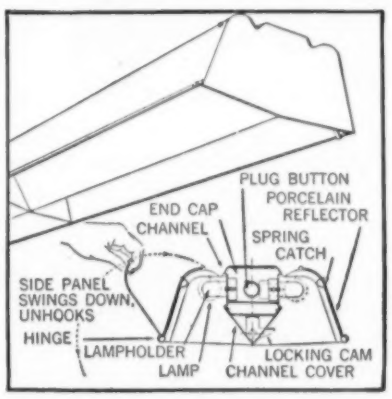
WOOD WASTE PULVERIZER
has tungsten carbide cutting teeth

Any kind of wood waste including Pine, Oak, Gum, Hickory, Elm, wet veneer, round-up and sandy bark, cores, timbers and slabs can be handled by this Blo-Hog pulverizer. It will grind up wood into forms for use as coarse fuel, chips for making wall board or as fine particles for further reduction by hammer mills for making wood flour or filler for the felt industry. Conveyor-fed, it requires no attendant and is protected against major damage from tramp steel. Tungsten carbide on cutting surface of hog's teeth assure maximum life. Made by **Jacksonville Blow Pipe Co.,** Dept. NED, P.O. Box 3687, Jacksonville, Fla.

For more details circle NED-253 J3 on enclosed inquiry slip

LIGHTING FIXTURE
has porcelain reflecting surfaces

With major reflecting surfaces of porcelain enamel on steel, Pacemaker industrial lighting fixture mounts two fluorescent lamps and is available in 4, 5 and 8-ft sections for single or continuous mounting. A variety of standard lamps can be fitted. ETL approved brick-type ballasts assure full light output, with an upward component of 25 per cent. All reflecting surfaces face downward and are ventilated to discourage dust accumulation. Removable side panels swing down for easy maintenance. Chain hangers, cable clamps and stems allow a wide variation of suspension methods. Made by **F. W. Wakefield Brass Co.,** Wakefield Park, Vermilion, O.



For more details circle NED-254 J3 on enclosed inquiry slip

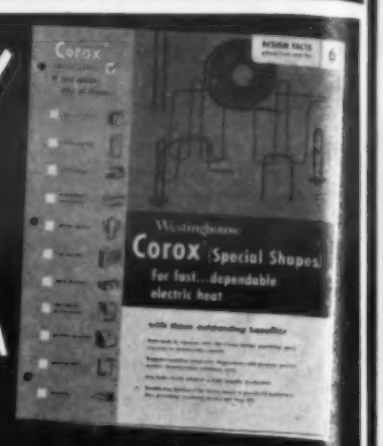
Feeders

Hardinge Co.—Illustrating and describing design details, capacities, dimensions and applications of constant-weight, weight-measuring, volumetric belt, disk and volumetric nonflooding drum feeders, 12-page catalog 33-E is now available. Units are used to control rate of withdrawal of materials from bins and hoppers and discharge them to conveyors or subsequent processing equipment.

For more details circle NED-255 J3 on enclosed inquiry slip

For more details circle NED-256 J3 on enclosed inquiry slip

Free!
VALUABLE HEATING ELEMENT DESIGN DATA



Learn more about COROX®, the versatile, flexible, electric, tubular heating element. See how COROX can be formed into any shape or size to give your products the ultimate in heating perfection. Read of the many outstanding features COROX will give your design. Contains an excellent chart matching your requirements with the correct application of COROX. Remember, COROX will outlast the life of your product. Get valuable information about THERM-A-NEERING® . . . the free, and exclusive, heating element and thermostat design service, that saves you costly mistakes in early design stages.

For COROX DESIGN FACTS No. 6 (B-5776), mark inquiry card, or write Westinghouse Electric Corp., Industrial Heating Dept., Meadville, Pa. J-10410

YOU CAN BE SURE . . IF IT'S Westinghouse

For more details circle NED-257 J3 on enclosed inquiry slip

in just 3 seconds

. . . you can read any surface temperature in your plant . . . accurately and easily . . . with the Alnor Portable Pyrocon.

Compact in size, complete in precision design and workmanship, this rugged instrument assures the highest standards of speed, accuracy and dependability. You can take temperature readings on materials in process, the finished product or the heated equipment itself—in as few as 3 seconds!

Alnor Portable Pyrocons come in scale ranges to 2000° F., with thermocouples for every application. You'll find full details on the Pyrocon exactly suited to your operations in Bulletin 4257. Send for your copy now. Write: Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle St., Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

For more details circle NED-258 J3 on enclosed inquiry slip

NEW REMOVABLE FRAME LEGGING!

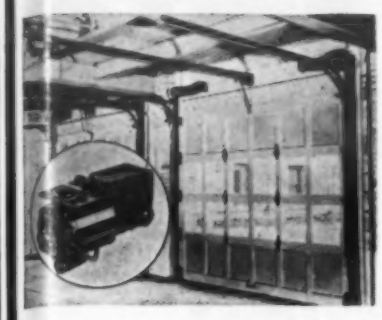
Here is AO's new 1512R Legging with removable frame and fabric. Covering is attached by snap fasteners. If covering is damaged, just order new covering. Should a spring break, keep covering and order new frame. 1512R is available in chrome-tanned *cowhide* as the 1512R-CL, in *asbestos* as the 1481R-A, in *flame-resisting duck* as the 1482R-FR. Your nearest AO Safety Products Representative can supply you.

American Optical
SAFETY PRODUCTS DIVISION

SOUTHBRIDGE, MASSACHUSETTS • BRANCHES IN PRINCIPAL CITIES

For more details circle NED-259 J3 on enclosed inquiry slip

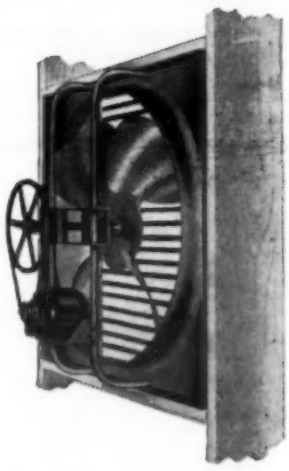
ELECTRIC DOOR OPERATOR
for doors up to 12-ft high



Designed for commercial and light industrial applications, model L electric door operator will handle doors up to 12-ft high and 150 sq ft in area. It can be equally well controlled by wall switch or by radio control, and a limit relay is provided to limit travel during both the opening and closing actions. Other features include heavy duty clutch which slips if door travel is obstructed, ¼-hp positive-reversing motor, and adjustable ½-in. pitch hardened roller drive chain. Made by **Barber-Colman Co.**, Dept. IB, Rockford, Ill.

▲ For more details circle **NED-260 J3** on enclosed inquiry slip ▲

INDUSTRIAL FANS
line has sealed bearings throughout



Sealed, lifetime-lubricated ball bearings in both fan and motor are the principle feature of the Deluxe line of industrial fans, reported to offer maintenance-free operation. The line is available in sizes from 24 to 48 in., and with ⅓ and ¾-hp motors. Quiet-running three-bladed fans are centrally mounted in the sheet metal housing, with automatically compensated drive belt tension. Distributed by **H. C. Biglin Co.**, Dept. 101, 177 Harris St. N.W., Atlanta, Ga.

▲ For more details circle **NED-261 J3** on enclosed inquiry slip ▲

WIRE WHEEL BRUSH
exchangeable side plates used

As this Fullanchor wire wheelbrush wears down, side plates can be exchanged for smaller ones to expose a new length of trim. Brush has balanced construction achieved by clamping almost identical number of filaments in each tuft, then anchoring tufts to core with evenly spaced wire staples driven through continuous steel channel. This feature plus dense brushing surface allows brushes to withstand speeds up to 8000 rpm before disintegrating. Wheels are made in 6, 8, 10 and 12-in. sizes with wire of crimped or stainless steel, brass or nickel. They can be used off-hand; mounted on flexible shafts; fixed on brushing machines, lathes and motors, or ganged on special machines. Made by **Fuller Brush Co.**, Industrial Div., Dept. NED, 3530 Main St., Hartford 2, Conn.

▲ For more details circle **NED-262 J3** on enclosed inquiry slip ▲

TERMINAL BLOCKS
have nonseparable hinged covers

Available with either screw or solderless type contacts, heavy-duty molded terminal blocks have nonseparable hinged covers providing added protection to control and circuit wiring. Units have provision for 4, 6, 8, or 12 circuits with either plain or numbered marking strips and are rated at 750 v 35 amp for the screw type and 750 v 50 amp for the solderless type. They are molded of CFG compound to specification MIL-P-14, but can also be supplied with special finishes, materials or details if required. Made by **Buchanan Electrical Products Corp.**, 1292 Central Ave., Hillside, N. J.

▲ For more details circle **NED-263 J3** on enclosed inquiry slip ▲

CONDUCTIVITY METER
probe requires ⅜-in. flat area

Absolute conductivity measurements of nonferrous conducting materials for determining physical properties are read directly from large dial on front of the Magnatest FM-100 conductivity meter. Relatively flat area of about ⅜-in. is all the space necessary for operator to place probe and take reading. In some cases, readings can be used to sort mixed lots of metals and alloys. Instrument can also be used for process and quality control in heat treatment, after standard comparisons have been made. Still another application is controlling purity of melt of nonferrous metals and alloys where small samples can be drawn, quenched and rapidly tested. Instrument is portable and operates from any 110-120-v ac supply. Made by **Magnaflux Corp.**, 7316 W. Lawrence Ave., Chicago 31, Ill.

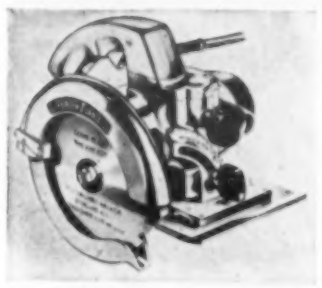
▲ For more details circle **NED-264 J3** on enclosed inquiry slip ▲

BAKING INSULATION VARNISH
combines flexibility with strength

High bonding strength, flexibility and long life at class B temperatures and above are features of G-E 9615 clear baking organic varnish. It bonds well to electrical components, to Mylar and to silicone-glass insulations. Developed for insulating aircraft generators and transformers, motors and heavy duty equipment operating at 150° C continuously, it will also provide additional moisture protection when used as a finish coat over class H insulation. It retains all the advantages of conventional oil-phenolic varnishes. Made by **General Electric Co.**, Chemical Materials Dept., 1 Plastics Ave., Pittsfield, Mass.

▲ For more details circle **NED-265 J3** on enclosed inquiry slip ▲

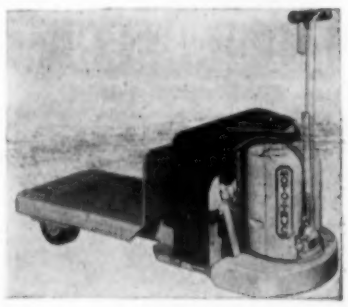
PORTABLE ELECTRIC SAW
7-in. heavy-duty model



Designed for all-purpose commercial, industrial and domestic use, model 115 portable electric saw will cut full 2-in. stock at 90 degrees. It weighs 12½ lb, is 11-in. long and has a die-cast aluminum frame. It is provided with telescoping blade guard, instantaneous bevel and depth adjustments and balanced hand grip with trigger switch. Available accessories include portable table with angle gage and rip fence, protractor gage to guide saw on angle work without measuring and marking, various abrasive blades and a radial arm table. Price is $75. Made by **Porter-Cable Machine Co.**, 24 Exchange St., Syracuse 8, N. Y.

▲ For more details circle **NED-266 J3** on enclosed inquiry slip ▲

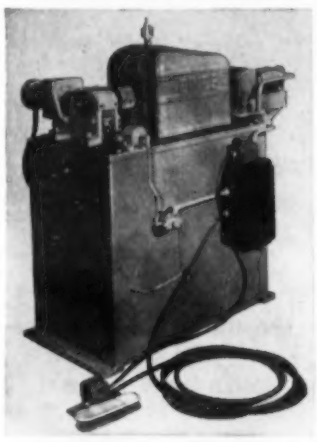
INDUSTRIAL TRUCKS
entire "walkie" line is redesigned



To be carried through the complete Moto-Truc "walkie" line, revisions in design are reported to give operating advantages and increased eye appeal. Drive unit, hydraulic unit and roller grip controls remain the same, but power unit is easier to maintain and safety features have been added. The power unit cover can now be removed by four bolts, and the unit itself removed by another four bolts. A time delay slow speed switch is fitted to eliminate the possibility of an operator starting the truck in high speed, and battery cables and connector have been repositioned to protect them from damage. Made by **Moto-Truc Co.**, 1961 E. 59th St., Cleveland 3, O.

▲ For more details circle **NED-267 J3** on enclosed inquiry slip ▲

END-FINISHING MACHINE
for deburring, chamfering and facing



Designed for work up to 3-in. OD, series 700 air-operated end-finishing machine has a versatile work range, including deburring, chamfering and facing, light turning, and center-drilling. It has 2-in. stroke and maximum spindle speed of 2000 rpm. Chuck and spindle air cylinders are controlled by an electric foot switch and operate from the same air line at 70 to 80 psi. Work clamping, spindle advance, tool feed and spindle retraction are all automatic. Less cutting time, the unit cycles in 1.5 seconds. Made by **Pines Engineering Co.**, 601 Walnut St., Aurora, Ill.

▲ For more details circle **NED-268 J3** on enclosed inquiry slip ▲

DO YOU KNOW? A relatively new external house organ "Unistrut Channel" will contain brief and readable articles on a wide variety of subjects of interest to business men. It will be sent free to architects, engineers, contractors and executives concerned with the use of steel framing for racks, supports, wiring and flexible framing. In addition to treating management and production problems of a general nature, other articles deal with sports, hobbies, little known facts and humor. To get on the mailing list, write to Unistrut Products Co., Dept. 75, 1013 W. Washington Blvd., Chicago 7, Ill.

DO YOU KNOW? A total of 144 colors is now available in Colorsol alkali resistant paint that will protect all types of masonry from ravages of weather. Colors are permanent, and paint provides finish that resists mildew, fungus and water. It can be brushed or sprayed. Developed by Martin-Senour Co., 2520 Quarry St., Chicago 8, Ill.

DO YOU KNOW? Most of the answers to the "Microfilm vs. Storage File" question have been compiled as a result of an extensive record retention survey. The advantages and disadvantages of both methods of retaining records are covered. Literature presenting the Diebold approach to record retention is available, and a survey of record retention problems will be made without obligation by Diebold, Inc., Dept. EF, Canton 2, O.

DO YOU KNOW? Made possible by the production of odor-free mineral spirits by the petroleum industry, odorless finishes are now available in semigloss and gloss enamels as well as in previously announced odor-free flat wall paints. Interior painting is no longer a nuisance in offices, commercial establishments, plants or institutions where paint fumes have been objectionable. Odor-free enamels developed by E. I. du Pont de Nemours & Co., Wilmington 98, Del.

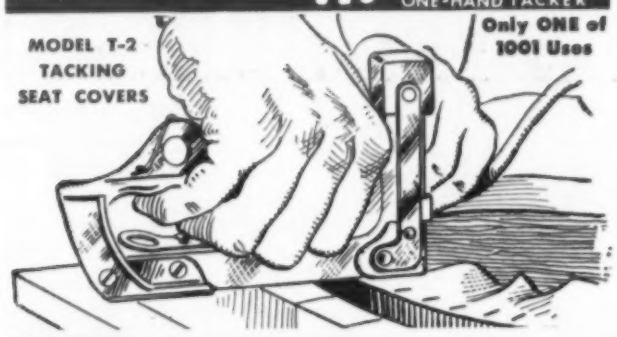
DO YOU KNOW? Conversion table and theoretical weights for clad steel plates are presented in new information card. Also given are inch-equivalent-for-sheet-thickness tables for AISI standard gage steel sheet; for U.S. standard gage stainless, nickel, Inconel and Monel sheet; and for B&S gage copper, brass and aluminum sheet. Included are conversion factors to determine the weight of solid alloys or certain nonferrous plates. Offered by Lukens Steel Co., Marketing Service, 308 Lukens Bldg., Coatesville, Pa.

DO YOU KNOW? Precious metal electrical contacts of the slug insert or spot lay variety are now produced by a cold-rolled process which retains the springiness of the metal. These contacts were always soft previously, but this development greatly extends their application. They can be made to user's specifications. Developed by D. E. Makepeace Co., Attleboro, Mass.

YOU CAN DO IT AT LESS COST with HANSEN ONE-HAND TACKER

MODEL T-2 TACKING SEAT COVERS

Only ONE of 1001 Uses



FASTER! With its zip-zip compound leverage action, Hansen saves time in all types of tacking and fastening. Fast, easy one-hand operation. Tacks fast as you grip. Leaves one hand free.

BETTER! Balanced design insures accurate, precision driving. Powerful action drives each staple firmly and neatly in place for improved quality and increased holding power. It is adaptable to a wide variety of uses — screens, insulation, TV wires, etc.

AT LESS COST! Hansen saves *time, steps,* and *materials* — operates faster — saves back-tracking — ready for instant, continual use.

(MODEL T-3-4 HANSEN TACKER)

36 DIFFERENT MODELS

80 STAPLE SIZES

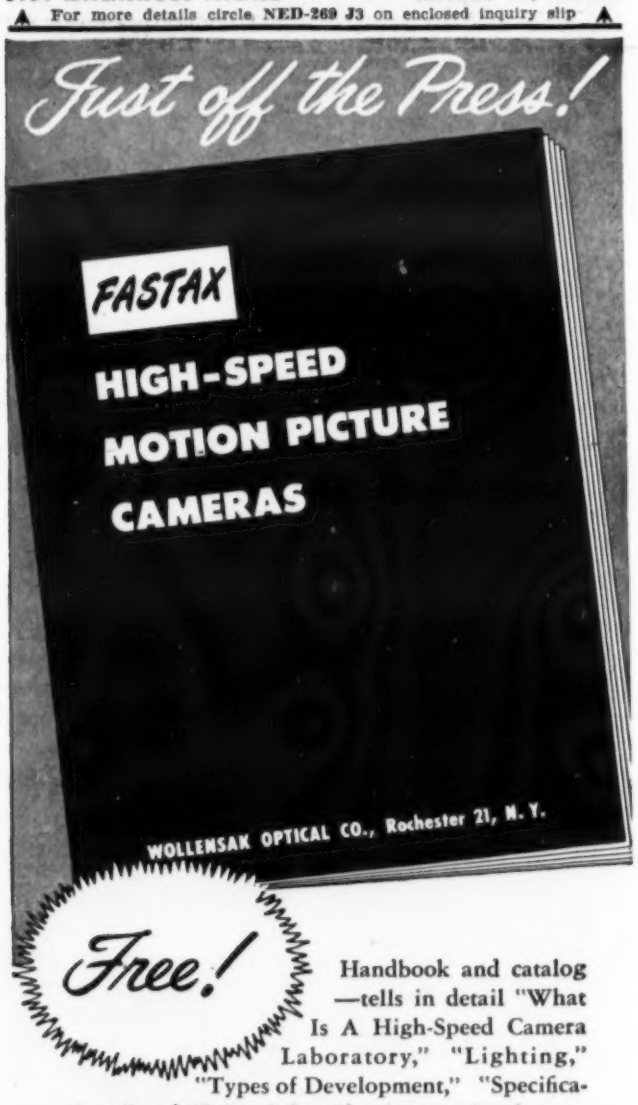
Request Booklet ...today

A.L. HANSEN MFG. CO.

5164 RAVENSWOOD AVENUE • CHICAGO 40, ILLINOIS

▲ For more details circle NED-269 J3 on enclosed inquiry slip ▲

Just off the Press!



Free!

Handbook and catalog —tells in detail "What Is A High-Speed Camera Laboratory," "Lighting," "Types of Development," "Specifications," and "Prices." Specifications section is completely illustrated—shows the equipment and accessories that make up a high-speed motion picture laboratory. For less than the salary of *one* engineer for *one* year industrial plants can set up their own laboratory and save thousands of dollars, plus lives . . . time . . . company reputation. Please use company letterhead when writing for this informative booklet. FASTAX Division, Wollensak Optical Co., Rochester 21, N. Y.

New!

16mm 100' Capacity FASTAX

8mm, 16mm, 35mm 400' Capacity FASTAX

Wollensak

OPTICAL COMPANY ROCHESTER, N.Y.

• RAPTAR
• RAPAX
• FASTAX
• MIRROTEL

▲ For more details circle NED-270 J3 on enclosed inquiry slip ▲

THREE-DIMENSIONAL PROJECTORS portable 16-mm type use arc lights

Three-dimensional projection equipment is now available for showing documentary and industrial motion pictures filmed in 3-D. System consists of two RCA 16-mm portable arc projectors, with selsyn interlocked motors for timing of the two images. Polarized glasses are used by audience. Equipment reproduces standard 16-mm sound tracks, both photographic and magnetic. It is easily adapted for reproduction of binaural or stereophonic sound recordings. Special silver-surfaced screens are required. Equipment has its own sound amplifiers, but can also be connected to almost any type of existing stage or auditorium loudspeaker system. Available from **Radio Corp. of America,** RCA Victor Div., Front & Cooper Sts., Engineering Products Dept., Camden 2, N. J.

▲ For more details circle NED-271 J3 on enclosed inquiry slip ▲

VISCOSIMETER for continuous control and record is temperature compensated type

This temperature compensated continuous viscosimeter is designed for recording and/or controlling viscosity at a selected reference temperature. Called the Viscorator, it consists of sensing elements, transmitter and recorder or other secondary instrument. Standard models can operate at stream temperatures up to 700° F and at various viscosities from 34 SSU to more than 10,000 SSF, all referred to a base temperature.

Instrument is preset at the factory to operate on a specific viscosity index, but any other index can be selected in the field by a simple adjustment. It can be fitted to record any or all of such variables as viscosity of the measured stream, viscosity corrected to a selected reference temperature, and temperature of the stream. Made by **Fischer & Porter Co.,** 12 Jacksonville Rd., Hatboro, Pa.

▲ For more details circle NED-272 J3 on enclosed inquiry slip ▲

air is expensive

IN THE WRONG PLACE

Air mixed with the steam in your heaters or coils is expensive because it retards heat transfer and lowers steam temperature. Remove air from steam heated machines with ***Sarco thermostatic air vents.*** Write for Bulletin 276 and the name of the Sarco man nearest you. He can help you select the best vent for your purpose and the right place to install it.

Represented in Principal Cities 502

sarco

SARCO COMPANY, INC.
Empire State Building, New York 1, N. Y.
Sarco Canada, Ltd., Toronto 5, Ontario

▲ For more details circle NED-273 J3 on enclosed inquiry slip ▲

LARGE SAVINGS

on pilot run and short-run stampings

Yes, it *is* possible—but it's a special skill of ours.

It's done with a new price-slashing method of making dies, used in conjunction with special machinery. In other cases we use custom equipment for die-less duplication by our own Machine-Cut Method.

FOR EXPERIMENTAL OR PRODUCTION REQUIREMENTS at rock-bottom prices, send us your blueprints. And make sure you get our latest, fact-packed literature.

STAMPINGS DIVISION

"ONE PIECE OR ONE MILLION"

LAMINATED SHIM COMPANY, INC.

2309 UNION STREET • GLENBROOK, CONNECTICUT

▲ For more details circle NED-274 J3 on enclosed inquiry slip ▲

NOT WHEN YOU USE IDEAL Stencil Marking Equipment

IDEAL STENCIL CUTTING MACHINE. Automatic Carriage Return and Word Spacer for fast, accurate stencils . . . visible cutting—see what you're doing . . . Minimum Margin Grip—saves up to 25% on stencil board. Made in three lettersizes.

"HANDY A" ANGLE BRUSH

Natural-grip handle . . . Push-button ink feed . . . one-piece, can't-leak Aluminum body.

IDEAL STENCIL INK

Complete line of black and colored fountain brush and metal marking inks. Free-flowing, quick-drying.

IDEAL STENCIL MACHINE CO.

FREE! "IDEAL SHIPPING GUIDE." Valuable shipping dept. tips.

134 Iowa Ave., Belleville, Ill.

▲ For more details circle NED-275 J3 on enclosed inquiry slip ▲

Interested? Write for Catalog T.

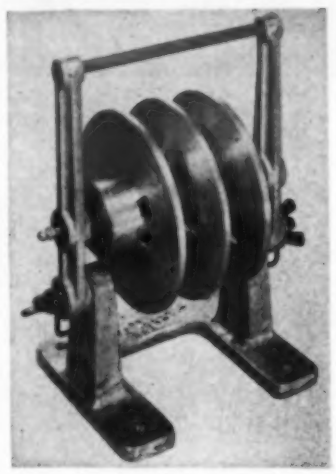
AT THE ISA SHOW . . . This indicating-recorder, along with T-E's other pyrometric equipment, will be at the Instrument Society of America Exhibit, Sherman Hotel, Chicago, Sept. 21-25, Booth 59.

Thermo Electric Co., Inc.

FAIR LAWN NEW JERSEY

▲ For more details circle NED-276 J3 on enclosed inquiry slip ▲

VARIABLE SPEED CONTROL



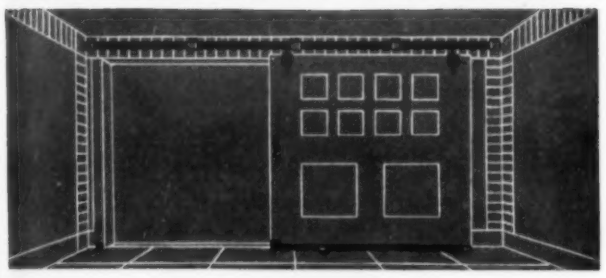
Variable speed control of V-belt and equipment up to a maximum 3 to 1 ratio is provided by this single lever controlled unit. Mechanically simple in design and sturdily constructed to withstand hardest service, models 1A and 2A Toledo variable speed controls have numerous unique features including; plain, smooth pulley, eliminating noise and vibration; stepless speed variation up to full 3 to 1 ratio; minimum pulley diameters are increased to transmit greater H.P., over entire range; new pulley design providing cylindrical bottom for V-belts which fixes minimum pitch diameters, preventing damage to belts and giving increased torque; single arm support, for easy belt application; large shaft, oilite bearings and lubricant reservoir; sector plate serving as dial indicator and additional locking medium; unusually attractive prices.

Wheel assemblies can also be purchased without mountings for application on machines providing built-in speed control.

If you have a variable speed control problem, either on plant equipment or on machinery you build for sale, investigate the Toledo variable speed control . . . you'll be interested in its efficiency and low price. Ratios as high as 10 to 1 are available. **The Toledo Timer Co.,** 2224 Albion St., Toledo, O. **Advt.**

For more details circle **NED-277 J3** on enclosed inquiry slip

COBURN SLIDING DOOR HARDWARE



. . . LOW INSTALLATION COST
. . . SMOOTH, EASY OPERATION
. . . LONG, TROUBLE-FREE LIFE
. . . ADAPTABLE FOR BOTH NEW AND REMODELING JOBS

Sliding door hardware for industrial applications of all types: Straight-sliding, sliding-folding, around-the-corner, roundhouse and fire doors.

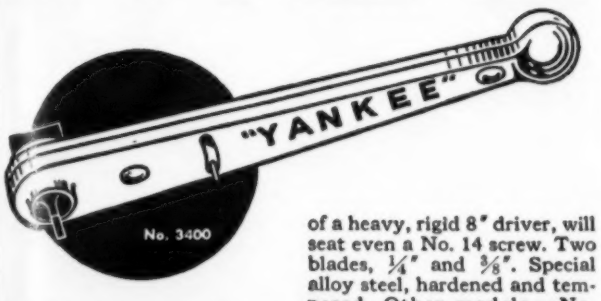
For additional information write to Sales & Engineering, 56 Sterling St., Clinton, Mass. or consult your classified telephone directory.

THE COLORADO FUEL AND IRON CORPORATION—Denver, Colorado
PACIFIC COAST DIVISION—Oakland, California
WICKWIRE SPENCER STEEL DIVISION—Clinton, Massachusetts

COBURN PRODUCTS
PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL & IRON CORPORATION CF&I

For more details circle **NED-278 J3** on enclosed inquiry slip

EASIEST WAY OUT OF A TIGHT SPOT



"YANKEE" Offset Ratchet Screw Driver

If there's an inch of clearance above or below the screw and room alongside to move your hand even half an inch, you can drive or draw that screw easily, quickly with a "Yankee" Offset Ratchet Screw Driver No. 3400. Only 3⅛" long, yet it has the power of a heavy, rigid 8" driver, will seat even a No. 14 screw. Two blades, ¼" and ⅜". Special alloy steel, hardened and tempered. Other models—No. 3800 for larger screws, No. 3423 for Phillips Screws; also No. 3600-5 Kit with handle and interchangeable adapters for hollow set and cap screws. All ratcheted to give fast, powerful action with the slightest swing of the arc. Sold by industrial distributors.

Write for the "Yankee" Tool Book

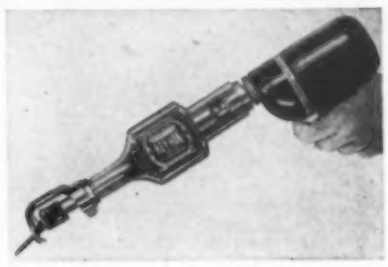
"YANKEE" TOOLS NOW A PART OF

STANLEY
Reg. U.S. Pat. Off.

THE TOOL BOX OF THE WORLD
NORTH BROS. MFG. CO.
205 West Lehigh Avenue
Philadelphia 33, Pennsylvania

For more details circle **NED-279 J3** on enclosed inquiry slip

SAW & FILE ATTACHMENT for portable electric drills



Several improvements haven been made in the design of the Key-Hak sawing and filing attachment for portable electric drills (*NED—June '49.*) The saw guard, now a heavy steel stamping, is more serviceable than the previous guard used. Improvements have also been made in the rear drive assemblies which eliminate any movement of the bearing housing within the main tool housing. Ball bearings are fitted on all rotary bearing surfaces, grease leakage is eliminated and improved assembly gives positive gear mesh and correct clearance at all times. Tool will cut 20-gage sheet metal or lighter and any thickness of wood without any starting hole. It fits any ¼-in. drill or motor driven flexible shaft. Made by **Producers & Distributors, Inc.,** Dept. NED, 714 S. Sixth Street, Allentown, Pa.

For more details circle **NED-280 J3** on enclosed inquiry slip

BARREL TUMBLING MACHINE total load capacity is 2000 lb

For removing slag, burrs and rust from welded and machined parts, model 2000 BurrMaster barrel tumbling machine has a Neoprene lined barrel with aluminum door giving a total load capacity of 2000 lb. All moving parts are enclosed, and a barrel guard is locked in a lowered position during operation. Variable speed drive can be set at any barrel speed from 5 to 30 rpm, and is governed by push-button control. Drive also locks to prevent barrel movement during loading or unloading. An electric timer shuts off the unit after completion of the operating cycle. Made by **White-Roth Machine Corp.,** Dept. NED, Lorain, O.

For more details circle **NED-281 J3** on enclosed inquiry slip

Materials Handling Equipment

Barrett-Cravens Co.—The "floor level" handling of goods and materials is subject of 100-page pocket-size Junior catalog No. 535. Information and specifications are given on fork, high lift, pallet, electric and hand lift trucks; industrial tractors; skids and lifters; portable and industrial elevators; portable cranes; stacking frames; steel storage racks; lifting and die tables; and handling specialties.

For more details circle **NED-282 J3** on enclosed inquiry slip

BIN STUCK LATELY?

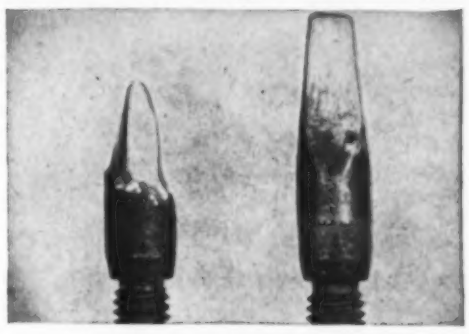
Turn to a CLEVELAND air vibrator. It's surprising the variety of materials it will move through your bins, hoppers and other handling devices. Economical and efficient to use for *anything* . . . gravel, ore, chemicals . . . inclined to arch, bridge or stick.

Standard metallic impact and air-cushioned, quiet types available in 29 different mountings.

COMPLETE LITERATURE ON REQUEST
THE CLEVELAND VIBRATOR CO.
2744 Clinton Avenue • Cleveland 13, Ohio

For more details circle **NED-283 J3** on enclosed inquiry slip

Reduce Maintenance of Soldering Iron Tips



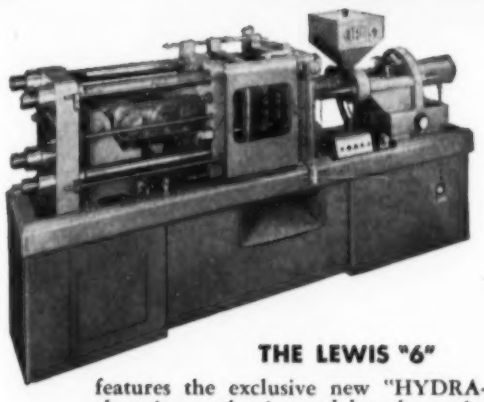
Save money on soldering iron maintenance! No filing of tips needed—G-E Ironclad copper tips have a layer of iron on the working surface which *retards* pitting and corrosion. Both tips above were used 363.5 hours at 250 C. Plain copper tip (left) pitted but Ironclad tip retained its original form, ready for many more hours of use—and still no filing will be needed.

Write For Free New Bulletin GEA-4519C to Section 720-95, *General Electric Company, Schenectady 5, N. Y.*

GENERAL ELECTRIC

For more details circle **NED-284 J3** on enclosed inquiry slip

2 OUTSTANDING PLASTICS INJECTION MOLDING MACHINES



THE LEWIS "6"

features the exclusive new "HYDRA-LOCK" clamping mechanism and does the work of much larger units at a fraction of their initial and normal operating costs. Its fast injection system, 200-ton clamp, automatic molding cycle and versatility assure high volume production of large projected area parts (up to 7.75 oz. polystyrene) with maximum efficiency and safety.

THE LEWIS "4"

is the lowest cost machine available today for production molding of precision lightweight large-area parts. It will produce 2 to 3-ounce parts in molds originally designed for 8-ounce machines. Model "4" handles almost any molding material . . . is easy and safe to operate . . . requires only 16 square feet of floor space.

1456-LW

WRITE FOR THESE BULLETINS FOR COMPLETE DETAILS.

LEWIS WELDING & ENGINEERING CORP.
14 Interstate St. • Bedford, Ohio

Gentlemen:
Please send me without obligation:
☐ Bulletin 101 describing Model "4"
☐ Bulletin 102 describing Model "6"

Name _____ Title _____
Company _____
Address _____
City _____ State _____

LEWIS
THE LEWIS WELDING & ENGINEERING CORPORATION

For more details circle **NED-285 J3** on enclosed inquiry slip

New! EXPLOSION-RESISTING PRESSURE SWITCH

FOR AIR COMPRESSORS AND PUMPS USED IN HAZARDOUS LOCATIONS

THESE FEATURES ADD UP TO A BETTER SWITCH:

- 200 lb. range and usual differential for air compressors and pumps
- Tamper-proof adjustment
- "Power-house" over-center spring fixed for positive action regardless of switch adjustment
- Externally mounted release valve protects against corrosion of internal parts

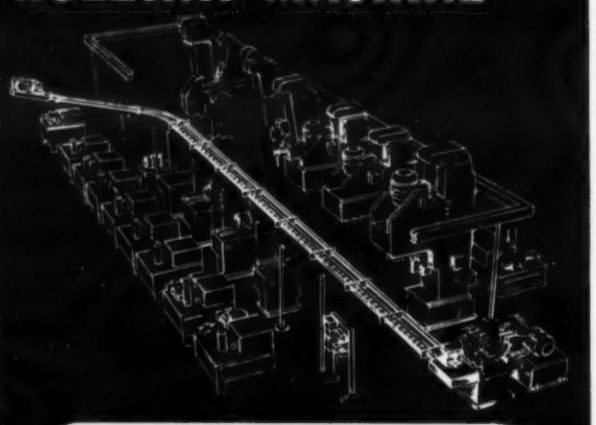
Also available in WATER-TIGHT construction

Write for Bulletin 9013-G.
Address Square D Company,
4041 N. Richards St., Milwaukee 12, Wis.

SQUARE D COMPANY

For more details circle NED-286 J3 on enclosed inquiry slip

NATCO selects HAPMAN TUBULAR CONVEYOR TO REMOVE ALL CHIPS from 98-operation HOLEWAY MACHINE

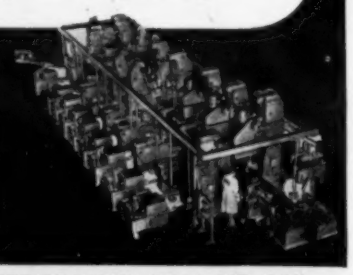


AUTOMATIC CHIP REMOVAL IS ESSENTIAL while this machine mills, trepans, drills, counterbores, reams and chamfers a cylinder block every 1.1 minutes!

SO NATIONAL AUTOMATIC TOOL CO. SELECTED A HAPMAN Tubular Conveyor as an original component for the unit. With its Neoprene Flights and patented Sealed-Pin Chain, this Conveyor provides the engineering excellence required for such an important investment.

HAPMAN CONVEYORS CAN DO THE JOB on many of *your* machine tools, sludge tanks and other equipment too! On new machines—or added to existing equipment—they'll convey almost any bulk flowable material in your plant at big savings!

Conveyor cross-section shows Flights and Sealed Pin Chain.



GET FULL DETAILS. WRITE FOR BULLETIN ND-953

Hapman CONVEYORS, INC.
DIVISION HAPMAN-DUTTON COMPANY
KALAMAZOO MICHIGAN

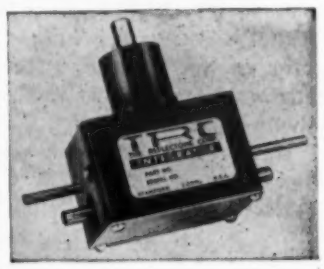
For more details circle NED-287 J3 on enclosed inquiry slip

SPEED INDICATOR
checks speeds from 40 to 50,000 rpm

This portable instrument will provide an instantaneous check of any shaft speed between 40 and 50,000 rpm. It is direct reading, and is provided with a rubber tip to be pressed against the shaft to be timed. Then speed is read directly off the dial. Instrument has a black metal crackle finish, and is provided with a protective leatherette case. Distributed by **Montgomery & Co.,** 60 Murray St., New York 7, N. Y.

For more details circle NED-288 J3 on enclosed inquiry slip

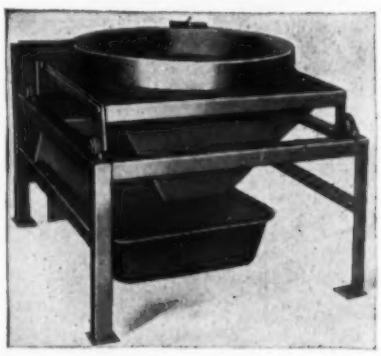
BALL & DISK INTEGRATOR
output speeds up to 1500 rpm



Essentially a high-precision low-torque speed changer for generating variable reversible speeds smoothly and steplessly, this ball and disk type integrator has maximum output speed of 1500 rpm at maximum recommended input to the disk of 750 rpm. Output torque at this speed should not exceed 5 oz-in. Unit can be used in analog computers, servo mechanisms and similar devices. It weighs 17 oz, is housed in a die-cast anodized aluminum alloy case and has hardened alloy precision steel disk and balls. Made by **Reflectone Corp.,** Stamford 11, Conn.

For more details circle NED-289 J3 on enclosed inquiry slip

SCREEN SEPARATOR
uses 24-in. diameter foundry riddle



Operated by ball bearing alternating current motor through nylon eccentric bushing, medium size Rampe screen separator uses standard 24-in. diameter foundry riddle. Stroke of screen movement is adjustable from 0 to 1½ in. by loosening and tightening one bolt. Bronze bushings are used throughout. Machine's dimensions are 37 x 29 x 24 in. Tote box and riddle can be supplied as extras, and screen mesh size is specified as desired. Made by **Rampe Mfg. Co.,** 3322 St. Clair Ave., Cleveland 14, O.

For more details circle NED-290 J3 on enclosed inquiry slip

INDIVIDUAL VULCANAIRE DUST COLLECTING UNITS

Are used on surface and other grinders where grinding dust must be removed.

Inexpensive, compact units, with no moving parts. Operated from your present air supply.

Installed in a few minutes, eliminating need for costly centrally located dust collecting systems.

The collector element is mounted on the side of the machine. Quickly cleaned, requiring no refills.

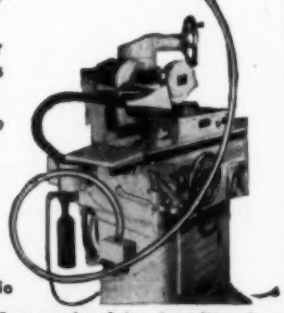
Vac-suction pick-up device (vacuum nozzle) is mounted on the grinding wheel guard or close to grinding wheel on other applications. This mounting permits constant contact with dust as the wheel is moved up or down.

A simple needle valve operates the unit, and can be shut off whenever the machine is not in use.

Available in two sizes: 700 series for grinding wheels 7" dia. or less—200 series for wheels 2" dia. or less.

Made by the makers of Vulcanaire *The* jig grinding attachment.

Write on your letterhead for "Dust Collector" Booklet.



VULCAN TOOL CO.
737 Lorain Ave., Dayton 2, Ohio

For more details circle NED-291 J3 on enclosed inquiry slip

High Quality . . . Low Cost
MYERS CENTRIFUGAL PUMPS

New Centri-Thrift Line. ⅙, ⅓, ¾ and 1 hp sizes, V-belt or motor-mounted. Ideal for air conditioning, hot and cold water circulation, booster service, laundry equipment, cooling systems, lawn sprinkling, liquid transfer. Myers quality features: replaceable bronze wearing ring; separate stainless steel pump shaft extended through open bracket for quick inspection and accessibility. Capacity to 50 gpm; heads to 92 feet. The Myers "economy" line.

Myers Industrial Pumps. Motor-mounted, direct-connected or belt-driven. This line of Myers centrifugal pumps has these advantages: replaceable wearing rings, shafts fully protected against liquids and wear. High and low heads. 3500 and 1750 rpm. 10 to 650 gpm against heads up to 280 feet. Standard fitted, all bronze, or all iron.

TAKE OFF YOUR HAT TO THE MYERS

Write for catalog and prices
THE F. E. MYERS & BRO. CO.
306 Fourth St., Ashland, Ohio

For more details circle NED-292 J3 on enclosed inquiry slip

TAL PORTABLE BENDERS — Complete ALL Piping Jobs FASTER

SAVE ON

- Number of Fittings
- Elbows & Couplings
- Cutting, Threading
- Overall Costs

Install pipe & conduit *faster* at *lower cost* by reducing up to 80% the number of fittings or elbows and couplings otherwise needed. Save on cutting and threading. You can with a Tal, because Tal Portable Benders make any degree bend up to 180° in a SINGLE OPERATION WITHOUT SHIFTING THE PIPE.

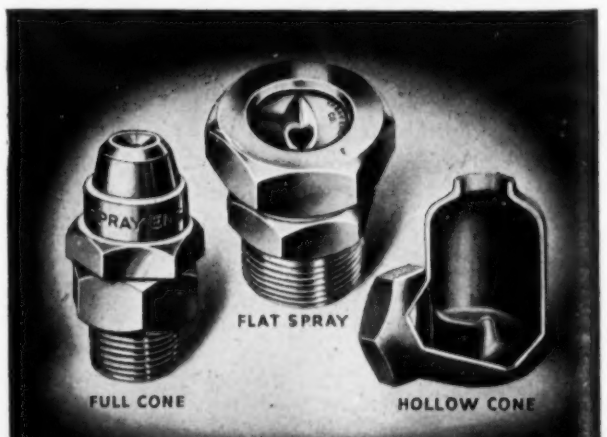
No guesswork for offsets, long sweeps or any other bends. No experience necessary to make accurate, wrinkle-free bends right on the job. *No spoilage.* Bend indicator assures identical repeat bends without measuring. Learn today how you can earn more money and handle more jobs with a Tal bender.

COMPLETE LINE OF BENDERS
For pipe up to *8 inch.*
For copper and thinwall tubing.
6 Way Hickeys—lifetime guarantee.

WRITE FOR THIS FREE BULLETIN.

Tal Bender, Inc. Dept. 4 Milwaukee 2, Wis.

For more details circle NED-293 J3 on enclosed inquiry slip



SPRACO NOZZLES

Write for NOZZLE CATALOG *to*
SPRAY ENGINEERING CO
106 CENTRAL STREET • SOMERVILLE 45, MASS.

For more details circle NED-294 J3 on enclosed inquiry slip

LASTS LONGER!

HOUGHTON COSMOLUBE

multi-purpose grease

allows more time between applications!

Industry's best grease buy because it gives you so many benefits . . .

- High melting point
- Pumps at 20° below zero
- Insoluble in water
- Adheres securely to metal
- Resists oxidation
- Stores without separating

GET LATEST BULLETIN on this heavy-duty grease widely used throughout industry in hot, cold, and wet locations. Write E. F. Houghton & Co., 303 W. Lehigh Ave., Phila. 33, Pa.

COSMOLUBE . . . a product of E. F. HOUGHTON & CO. PHILADELPHIA · CHICAGO · DETROIT · SAN FRANCISCO

Ready to give you on-the-job service . . .

For more details circle NED-295 J3 on enclosed inquiry slip

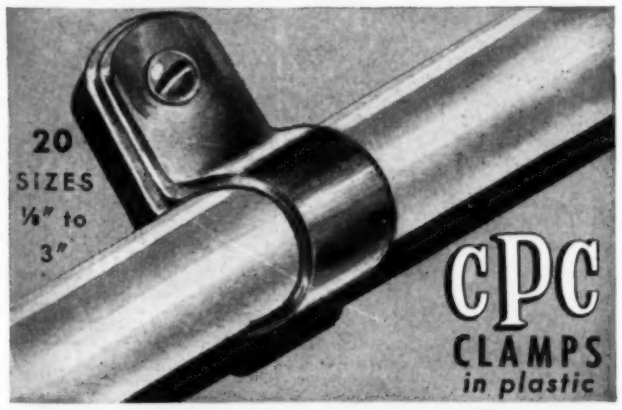
Enterprise CUTS "Returns" with Crystal Tissues

The Enterprise Aluminum Company puts a gleaming finish on their electric percolators. Ordinary kraft paper packaging didn't always protect that finish. Enterprise heard complaints . . . got "returns". That's when they tried *two* sheets of Crystal Tissues for wrapping: A soft, strong *inner* sheet to prevent scratching and "break-through" . . . a tough *outer* sheet to prevent "burns" from carton walls. Returns (and complaints) dropped *way* down. Are Crystal Tissues the answer to *your* wrapping or packaging problems? Write Dept. N and see.

THE CRYSTAL TISSUE COMPANY
Middletown, Ohio

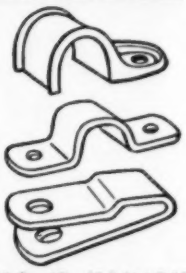
Crystal

For more details circle NED-296 J3 on enclosed inquiry slip



TOUGH . . . Enduring

Safer, Simpler, faster, more secure. For cables, thin-wall tubing, wires, conduits, light hose. *No shorts! No tearing! No corrosion!* Wide variety shapes, styles, sizes and materials. Write today:



2818W. NORTH AVE. • CHICAGO 47, ILLINOIS

COMMERCIAL PLASTICS CO.

For more details circle NED-297 J3 on enclosed inquiry slip

PUNCH PRESSES line has design modifications

Redesigned to afford increased die space or "window height" by the elimination of the column radius, the Emco punch press line now also has a clamping device in the ram, consisting of tool steel block and bolt. Either bench or stand-mounted units are available with or without motor drive and in two sizes. Model W has standard ¾ and 1¼-in. strokes and 5-ton capacity, and 1½ and 2-in. standard strokes and 10-ton capacity are available in the model X. Made by **Klaas Machine & Mfg. Co.,** 4310 E. 49th St., Cleveland 9, O.

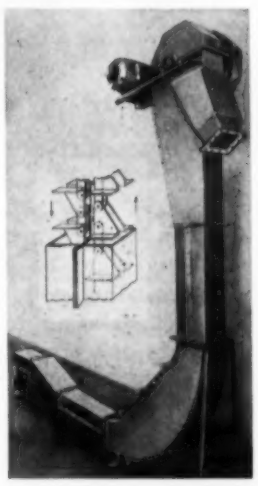
For more details circle NED-298 J3 on enclosed inquiry slip

FLEXIBLE COUPLING features interchangeable hubs

With split interchangeable hubs on both flanges, Sure-Grip flexible coupling design gives fast installation and removal. Various shaft sizes are accommodated readily. It consists of two cast iron flanges with lugs cast integrally and accurately machined for balance, and is hard plastic coated to prevent rust. It is available in sizes 4 through 10, with either Neoprene or leather intermediate disks as required. Made by **T. B. Wood's Sons Co.,** Fifth Ave., Chambersburg, Pa.

For more details circle NED-299 J3 on enclosed inquiry slip

DUST-TIGHT CONVEYOR handles granular bulk materials



Handling such granular bulk materials as grains and dry chemicals, Flowmaster dust-tight conveyor will convey horizontally, vertically, or along inclines. It comprises an enclosed endless chain fitted with flights which move material in a continuous flow, and is particularly suitable for medium and low-capacity operations. It can readily be installed in confined spaces or around existing equipment, and is self-loading and self-discharging. Made by **Gifford-Wood Co.,** 23 Hill St., Hudson, N. Y.

For more details circle NED-300 J3 on enclosed inquiry slip

Work with adhesives? catsup? oils?

TEST · STUDY · CONTROL VISCOSITY

As Simply, Quickly and Easily as Taking Temperature Readings

WITH A Brookfield SYNCHRO-LECTRIC VISCOMETER

Adaptable to any problem from less than one to 32,000,000 centipoises. Send for illustrated catalog.

Just a flick of a switch, then read the Brookfield dial, and you have your viscosity determination in centipoises. The whole operation, including cleaning up, *takes only a minute or two.*

Available in a variety of models suitable for extremely accurate work with both Newtonian and non-Newtonian materials, Brookfield Viscometers are portable and plug in any A.C. outlet. *Write today.*

Well-known national manufacturer of vegetable, animal and resin adhesives reports: "Have standardized on Brookfield Viscometers for research and quality control in all our plants and laboratories."

Write Dept. O. Stoughton, Mass.

BROOKFIELD ENGINEERING LABORATORIES, INC.

For more details circle NED-301 J3 on enclosed inquiry slip

80% fewer hand injuries with JOB-FITTED gloves — in this metal products plant

Accurate records by this large maker of galvanized steel products (name on request) showed this improvement after adopting gloves which fit their operations. The safer, cut-resistant gloves also cost less, often outwearing canvas or leather as much as 8 to 12 shifts.

Free test offer to employers: If your operations involve abrasive, sharp or slippery materials, or presence of oil, chemicals or moderate heat, send us a short description. Without cost, we will supply samples of gloves which fit the condition, with simple procedure for job-testing.

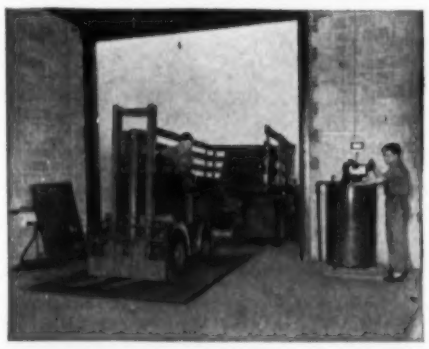
Edmont JOB-FITTED GLOVES

Edmont Manufacturing Co.
1240 Walnut St., Coshocton, Ohio
Leading industrial distributors carry Edmont gloves in stock

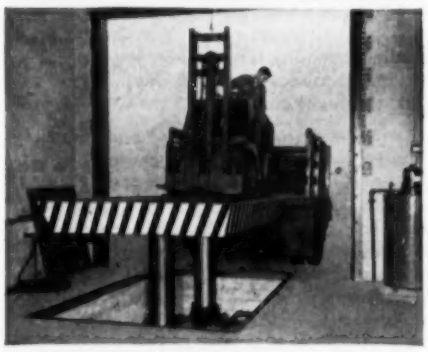
For more details circle NED-302 J3 on enclosed inquiry slip

GLOBE OiLIFT

solves the problem of loading fork trucks onto road trucks . . .



Globe Loading Lift recesses flush with floor. Fork lift trucks are driven right onto the checkered-steel surfaced platform.



Two hydraulic cylinders raise the Globe OiLIFT flush with truck bed. Fork trucks are transferred quickly and safely.

A fork lift truck weighing from 3,000 to 17,000 pounds is a heavy "package" to load onto a road truck. A factory service branch solved this tough materials handling problem by installing a Globe Hydraulic Loading Lift with a capacity of 20,000 pounds in its driveway.

Now, a fork truck is transferred between driveway and road truck in a matter of minutes. Two hydraulic cylinders power the checkered-steel surfaced platform which measures 6'4" x 10'. In "down" position, the platform recesses flush with the floor to allow unrestricted use of the driveway. The usefulness of this Globe Loading Lift is not limited to handling fork trucks—it is used for loading and unloading *all* kinds of freight to speed materials handling and cut costs.

You can solve *your* materials handling and lifting problems with a Globe OiLIFT. Use the coupon *today* to get a free copy of Globe's illustrated book of "Case Studies in Modern Lifting."

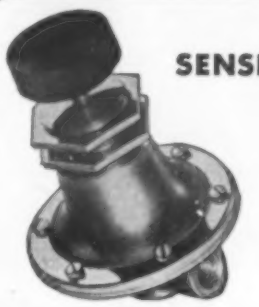
GLOBE
THE BEST LIFT

Globe Hoist Company NED-536
1000 E. Mermaid Lane
Philadelphia 18, Pa.

Please send me a copy of "Case Studies in Modern Lifting."

Name.....
Company.....
Address.....
City and Zone.....State.....

For more details circle NED-303 J3 on enclosed inquiry slip



SENSITIVE TO A "TOUCH"

STABLE

DRIFT-FREE

CONO AIR PRESSURE REGULATOR

The Cono Precision Regulator is ideal for "dead-end," or small volume flowing service. Responsive to setting changes as small as *five thousandths psi.* Holds set pressure regardless of vibration or normal upstream pressure variations. Streamlined design, all brass and stainless steel. Styles for flush panel or line mounting. Available in ¼" pipe size, in a variety of spring ranges from 0-5 to 0-125 psi.

BULLETIN PH-10.

CONOFLOW CORPORATION
2100 ARCH ST.
PHILADELPHIA 3, PA.

Cono-Controls

CC-115

For more details circle **NED-304 J3** on enclosed inquiry slip

New Jacques, Jr. CUTTERS

Speed Production! Make Cleaner Cuts!

TABLE MODEL
featuring automatic material-holder.

Ideal for cutting paper, plastics, rubber, fabrics and other light materials

Now, at low cost, you can increase cutting efficiency and production. Jacques, Jr. all-metal cutters are designed for cutting jobs which do not require large heavy-duty cutters — yet *do* require more ruggedness, speed, and accuracy than are found in ordinary light paper cutters.

Jacques, Jr. construction features add speed and efficiency to your cutting operations. Exclusive automatic material-holder (self-adjusting clamp) automatically comes down, as blade is lowered, to hold material to be cut. Adjustable gauge and steel rule (on table model) assure accurate cuts. Other features include high grade steel blades, spring tension cutting, and safety spring on blade handle (to prevent accidental cutting). Sturdy, all-metal construction stands up under continuous use.

BENCH MODEL

Attaches to your own bench. Cuts materials from continuous rolls or long strips. Perfect for many in-line production operations.

AVAILABLE IN TWO MODEL TYPES

Table model comes in 12", 16", 20", 24" and 30" sizes. Bench model (for your own bench) available in 24", 30" and 36" sizes.

Investigate the advantages of Jacques, Jr. cutters now! Write for descriptive circular giving complete information!

There's a Jacques shear or cutter for your every cutting need!

Let us know your cutting requirements and problems. We'll recommend the shear best suited for your use. Write for descriptive catalog page on each machine.

UNIVERSAL SHEAR — Cuts material quickly into clean, uniform strips—⅛" to 20" in width. (Six sizes available)

BENCH SHEAR — Cuts widths up to 10 ft. on your own bench. Extremely versatile! (Twelve sizes available)

POWER SHEAR — For intermittent or continuous cutting, up to 70 strokes per min. Adaptable for *any* production set-up.

OTHER SHEARS
- J-L Shear (lighter, less expensive adaptation of Universal Shear)
- Card Cutter (small, compact cutter)
- Bookbinder's Shear (for specific applications)

For faster, cleaner cutting through the years, specify only genuine Hobbs replacement blades, accessories, and repair parts.

HOBBS MANUFACTURING CO.
41 SALISBURY ST., WORCESTER 5, MASS.
EST. 1883
Chicago Office: 549 West Washington Boulevard
Jacques Hand Shears, Hobbs Production Cutters, Corner Cutters, Slitters and Rewinders, Autotronic and Tri-Power Die Presses.

For more details circle **NED-305 J3** on enclosed inquiry slip

REWIND STARTER for small gasoline motors

For use on lawn mowers, chain saws and similar gasoline engine-equipped products, Bulldog starter applies friction on the inside of conventional starter cup. Starter is cam-actuated, and engages after ¼-in. pull on the starter rope. Assembly does not require close-tolerance assembly and is unaffected by flooding with water, oil, or gasoline. It is available for incorporation in original equipment with or without housing and various grass and chip guards. Made by **Armstrong Products Co.**, Dept. N, 6450 N. Teutonia Ave., Milwaukee, Wis.

For more details circle **NED-306 J3** on enclosed inquiry slip

SMALL HOLE CUTTER drills ⅝ to 1¼-in. holes

Designed to cut small holes in tight places, No. 1 Junior size of the D & D adjustable hole cutter has a work range between ⅝ and 1¼-in. diameter in sheet metal. The tool holder has a ¼-in. shank, and is fitted with a ⅛-in. pilot drill and ¼-in. adjustable tool steel cutting blades. Tool is designed for cutting speeds under 500 rpm. Distributed by **N. J. Frayn Co.**, 1002 Arlington Rd., Redwood City, Calif.

For more details circle **NED-307 J3** on enclosed inquiry slip

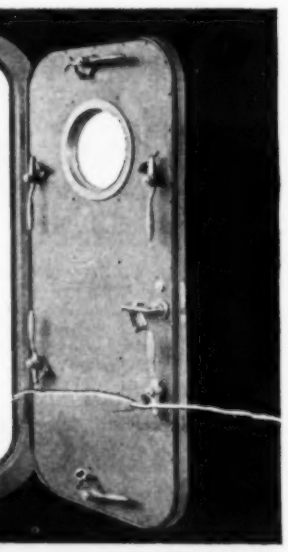
CARBIDE GRINDING WHEEL grinds steel shank and carbide tip

Construction of this MM grinding wheel for cemented carbide tools allows grinding of steel shank equally as well as carbide itself. Metallurgical injury to carbide is eliminated. Fine, loose abrasive embedded in pellet form throughout wheel constantly flows between metal and wheel. This allows main wheel body to be somewhat harder than normally used, resisting excessive grooving and requiring minimum of dressing to maintain proper grinding surface. In dry grinding, a minimum amount of dust is produced. Wheels are made in standard Steel Back and Cylinder sizes in variety of grades to meet specific requirements by **Macklin Co.**, Dept. M, Jackson, Mich.

For more details circle **NED-308 J3** on enclosed inquiry slip

Overbeke-Kain ACCESS DOORS

- Weathertight
- Watertight
- Insulated
- Flush-Mounted



Engineered for use on transformer vaults, weatherproof rooms, marine bulkheads, test rooms and similar applications, this new insulated door-and-frame unit is available in a range of sizes to meet every individual requirement. It can be furnished with round or square corners on door or frame.

Positive seal is assured by special neoprene rubber gasketing which is readily adjusted or replaced. Standard Overbeke-Kain closures are all-welded steel construction. Stainless steel, aluminum or other non-corrosive materials are also available. Hardware is supplied to user's specifications.

Write for Bulletin No. 784 for complete information.

the Overbeke-Kain company
20979 AURORA RD....BEDFORD, OHIO

906-OK

For more details circle **NED-309 J3** on enclosed inquiry slip

NEW! ISLAND PALLET DOLLIES

HANDLE WITH EASE

cut Loading Time in half

TAKE over where fork trucks leave off . . . at the Truck or freightcar door. Island Pallet Dollies have staggered bottom rollers to eliminate trouble from floor racks. Built to handle *your* pallets. All parts are standard equipment. Write for Bulletin RTD-1A. Dept. NE9.

ISLAND EQUIPMENT CORP.
27-01 Bridge Plaza North
Long Island City 1, N. Y.

For more details circle **NED-310 J3** on enclosed inquiry slip

New "PULL-GEAR" SPEED-REDUCING PULLEY Increases Drill Press Capacity

NEW MODEL

Provides Correct Speed and Power to Drill Up to 1⅜" with ½ H.P. Motor

Amazing new internally geared speed reducer doubles drill press capacity. Greater power, greater efficiency, greater productivity.

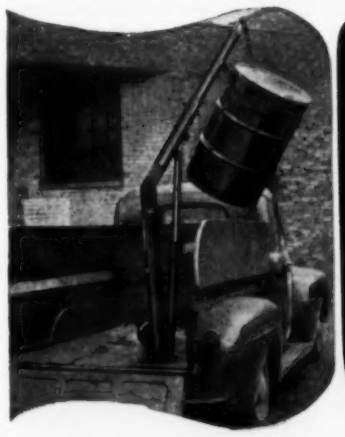
Provides the correct speed and power for larger drilling, reaming, tapping and boring on light presses. Easily installed in five minutes. Adaptable to all type machines. Spindle speed range approx. 45 to 2000 RPM. Made in 3 motor shaft sizes: ½" - ⅝" - ¾". Write for literature.

Some Territories Open to Jobbers

THE PULL-GEAR CO.
4118 E. 8-Mile Rd., Detroit 34, Mich.

WRITE FOR LITERATURE

For more details circle **NED-311 J3** on enclosed inquiry slip



SPEED LOAD HANDLING for Truck, Shop or Machine

UNIT *utility* HOIST

Hydraulically operated Unit Utility Hoists can speed and ease handling of 1000 to 2000 lb. loads around your trucks, shop or machines, and the hoist itself can be switched from the truck, floor or machine mount in seconds. Three lifting points and boom extension give a wide working range. Hoist swings 360° on truck and locks securely in traveling position. Many uses in every plant.

Write today for latest information

UNIT MFG CO.
1223 Harmon Place
Minneapolis 3, Minnesota

For more details circle **NED-312 J3** on enclosed inquiry slip

5 REASONS FOR CALLING
CORDS LTD.
For Cords and Cord Sets

- Fast delivery on cords of standard construction.
- Complete engineering and manufacturing service on cords for special applications.
- Integrated engineering-production control from rod mill to mold department.
- Most comprehensive stock of dies and molds for electronic cords and assemblies in existence.
- Quality proved by use on millions of products.

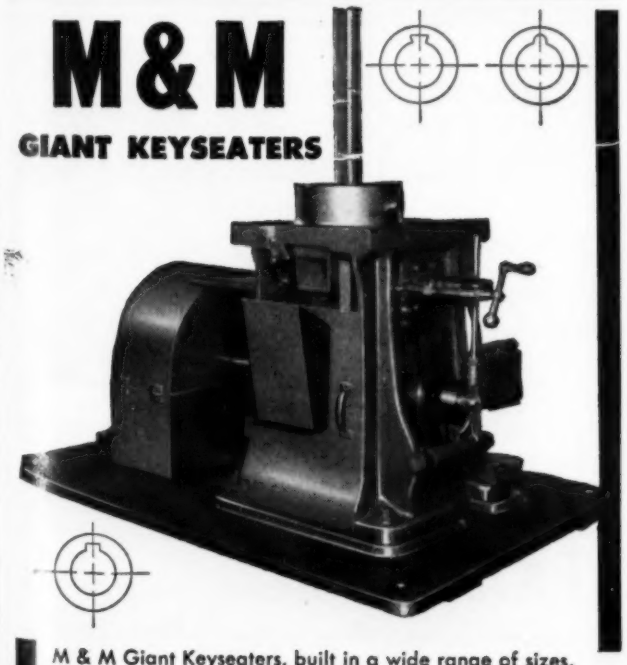
Write for details, explaining your application

WIRE SX PRODUCTS
CORDS LTD.
DIVISION OF ESSEX WIRE CORPORATION
121 DODGE STREET, DE KALB, ILLINOIS

▲ For more details circle NED-313 J3 on enclosed inquiry slip ▲

▲ For more details circle NED-314 J3 on enclosed inquiry slip ▲

M&M
GIANT KEYSEATERS



M & M Giant Keyseaters, built in a wide range of sizes, speedily and accurately cut internal keyways or splines in the bores of pulleys, gears, fly wheels or any other machine part. Special fixtures and cutters are available for unusual shaped keyways and taper work. Send us your problems today.

MITTS & MERRILL 68
1000 South Water • SAGINAW, MICH.

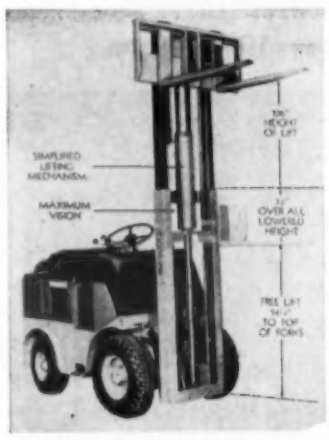
▲ For more details circle NED-315 J3 on enclosed inquiry slip ▲

IMPROVED 5-IN. ROLLS
time-saving, safety features added

Three time-saving and safety features have been added to Wysong series C all-steel 5-in. rolls, which are available in sizes of 36 x 3/16-in., 48 in. x 8-gage, 60 in. x 10-gage, 72 in. x 12-gage and 96 in. x 16-gage. Setup time has been reduced by fitting a front-mounted handwheel for the rear roll parallel adjustment, with indicator scales clearly visible from the front of the machine. A safety treadle extends the full length of the machine. After it has been tripped, circuit must be remade at the pushbutton station before machine will operate. The top-roll now raises automatically with the lowering of the drop-end, which is released by a single lever, and, on being raised, locks automatically in position. Made by **Wysong & Miles Co.**, 631 Fulton St., Greensboro, N. C.

▲ For more details circle NED-316 J3 on enclosed inquiry slip ▲

HIGH FREE-LIFT MAST
for Towmotor fork lift trucks



Designed to facilitate high stacking in box cars and low ceiling areas, this Towmotor mast assembly provides high free-lift before increasing overall lowered height of the truck. It is interchangeable with the standard mast and can be installed as original equipment at extra cost on models 390, 420, 460, 400-P and 480-P. On model 480-P, unit with 106-in. lift provides 54¼ in. of free-lift before increasing overall lowered height of 73 in. It is also available as original equipment on any LT-35 unit, where available lifts range up to 160 in. with 81¾-in. free lift. Made by **Towmotor Corp.**, 1219 E. 152nd St., Cleveland 10, O.

▲ For more details circle NED-317 J3 on enclosed inquiry slip ▲

DO YOU KNOW? Up to 15 readings of pressure, vacuum, liquid level, flow, temperature, static or differential pressure, motion, voltage, current and load taken at separate locations or areas can be transmitted any distance to Metameter receiving instruments over a single circuit. Readings can be transmitted over telephone circuits, carrier current, radio, microwave, VHF, UHF, private wires and low cost telemeter circuits. This multiplexing transmitting and receiving system has been announced by Bristol Co., 30 Bristol Rd., Waterbury 20, Conn.

▲ For more details circle NED-318 J3 on enclosed inquiry slip ▲

Enjoy THE ADVANTAGES OF
HAVING TIME RECORDED
ACCURATELY
AUTOMATICALLY
EFFICIENTLY

THE NEW Simplex TIME RECORDER

This new Simplex Time Recorder figures payrolls easier, 50% faster—cuts payroll costs in half.

Vertical or horizontal print . . . Two color registration . . . Trigger-touch print . . . Direct subtraction . . . One-minute positioning . . . Attractive, indestructible case.

SIMPLEX TIME RECORDER CO., Gardner, Mass., Dept. N-9
Please give us more information on:
☐ Cost Recorder ☐ Time Cards ☐ Electric Time Stamp
☐ Watchman's Clock ☐ Time Card Files ☐ Time Card Racks
Firm.....
Name.....
Street & No.....
City..... State.....

▲ For more details circle NED-319 J3 on enclosed inquiry slip ▲

Hammond of KALAMAZOO
FAST CARBIDE TOOL GRINDING

For Fast Grinding of Carbide and High Speed Tools,
HAMMOND 14" GRINDERS
are the Choice of America's Leading Manufacturers . . .

MODEL 14-WD Wet or Dry

NO SPRAY—NO SPLASH (Patented) Revolving guard closes one side of wheel while other is in use, permitting freedom of movement and unobstructed vision.

EASY WHEEL CHANGE, by removing two cup screws and raising Wheel Hood on top, allowing easy access to wheel. Spout connections do not require disconnecting.

SAFETY CUP WHEEL DISC (Patented) closes cup of wheel, preventing hand injuries or dropping tools into cup of wheel.

Note these PLUS FEATURES . . .
- Two operators can grind tools with freedom of movement
- "No Spray—No Splash" guards (Patented)
- Safety cup wheel disc (Patented), prevents dropping tools into wheel cup
- Easy and quick wheel change
- Tables adjust "in and out" by hand crank to compensate for wheel wear
- Wet or dry—or CO_2 carbon dioxide
- Oversize, ball bearing, precision spindle with multi-V-belt drive
- Heavy machine tool construction—net weight 2250 lbs.

There are over 6000 Hammond Carbide Grinders in service! Write for Catalog No. 225 showing America's most complete line of Carbide Tool, Chip Breaker and Diamond Finishing Grinders.

Hammond Machinery Builders INC.
1623 DOUGLAS AVENUE • KALAMAZOO, MICHIGAN

▲ For more details circle NED-320 J3 on enclosed inquiry slip ▲

SOUTHCO DRIVE RIVETS
eliminate surface holes . . .
improve appearance . . .
speed production

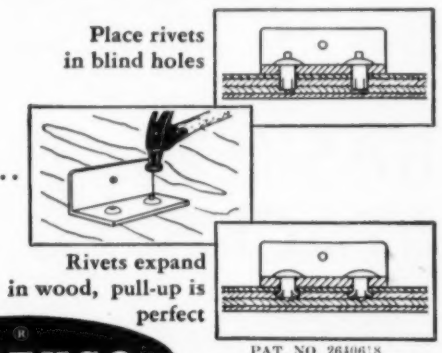
A Philadelphia manufacturer of food display equipment and banquet tables fastens folding aluminum legs to ¾" plywood table tops. SOUTHCO Drive Rivets are used to fasten leg assemblies to table tops because they are fast, strong and don't mar the table top.

Previously nuts and bolts were used but these required countersunk surface holes which, even though filled and sanded smooth, still marred the surface. Wood screws were tried but they pulled out. Four assemblies are now made in time formerly required for three.

In addition, the sales manager says "SOUTHCO Rivets have increased sales value of tables immeasurably".

SOUTHCO Drive Rivets are ideal for metal-to-wood applications. Just place in a blind hole, hit the pin and the rivet's in. No special tools, no bucking, nothing to finish off, no waste of time or material. SOUTHCO automatic pull-up draws parts tightly together, makes a tough, strong joint—quickly. How can you benefit from using SOUTHCO Drive Rivets? Write for complete details to SOUTHCO Div., South Chester Corp., 1413 Finance Building, Philadelphia 2, Pa.

©1953



PAT. NO. 2640618 OTHER PATS. PEND. RIVET & MFG.

SOUTHCO FASTENERS

PAWL, SCREW AND SPRING • DRIVE RIVETS
ANCHOR NUTS • ENGINEERED SPECIALTIES
OFFICES IN PRINCIPAL CITIES

WHEREVER TWO OR MORE PARTS ARE FASTENED TOGETHER, STANDARD AND SPECIAL DESIGNS FOR IMPROVED PERFORMANCE AND LOWER PRODUCTION COSTS

▲ For more details circle NED-321 J3 on enclosed inquiry slip ▲

From 6" to 24.5" Rubber Tire Diameters.
Pneumatic—Drop Center and Demountable Rim.
Cushion and Solid Rubber Bolted Types.
Heavy Duty Wheels with Molded-on rubber.

DICO COMPANY

Let DICO help you with your wheel problems. Write for complete catalog.

206 S.W. 16th ST., DES MOINES, IOWA

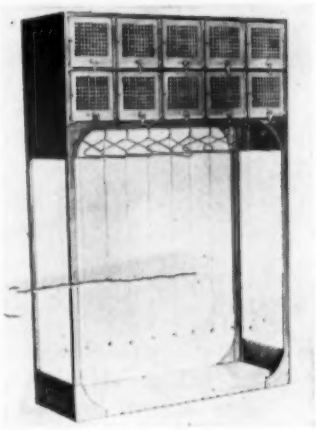
For more details circle NED-322 J3 on enclosed inquiry slip

CONVEYOR SYSTEM
has precut connecting cable lengths

Using plow-steel cable cut to either 16, 24, or 32-in. standard lengths with steel buttons swedged on both ends, the Cable-Link conveyor system permits versatile spacing of individual trolleys and makes it possible to remove or add to their number easily. The button ends of the cable units recess into malleable steel brackets, which are then tightened down by nuts exerting a 360-degree pressure on the cable. Trolleys can be placed on 8, 16, 24 and 32-in. centers. Three systems are available for light, medium and heavy-duty materials handling with station load capacities ranging from 80 to 500 lb. Pull loads per drive range from 1500 to 4000 lb, with overload safety factors of three. Made by **Cable-Link Corp.**, 19413 Derby, Detroit 3, Mich.

For more details circle NED-324 J3 on enclosed inquiry slip

LOCKER RACK
portable unit for 10 persons

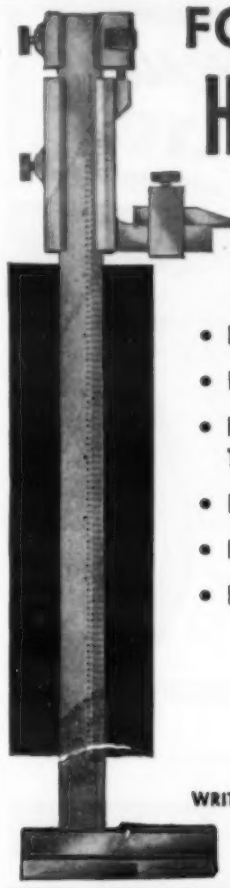


For use where space is at a premium and low cost is a requisite, this portable locker rack for 10 persons is equipped with individual lockers. Coats are secured by dropping chain through sleeve and then locking chain in locker door slot. Doors drop shut from the top and are equipped with built-in lock and two keys. Unit has a raised base keeping clothes and overshoes off the floor. Unit doors are finished in light tan, and remainder in green baked-on enamel. Size is 50-in. wide, 18-in. deep and 76-in. high. Made by **Lyon Metal Products Inc.**, 324 Clark St., Aurora, Ill.

For more details circle NED-325 J3 on enclosed inquiry slip

DO YOU KNOW? Expanded facilities have been made available to further advance the improvement of product performance through greater use of precisely lapped parts. Practically an unlimited range of materials can be lapped to meet customer's requirements. Controlled atmosphere is used to assure accuracy of finished product. Both electrical and optical inspection are provided. Service offered by Norton Co., Grinding Machine Div., Worcester, Mass.

For more details circle NED-326 J3 on enclosed inquiry slip



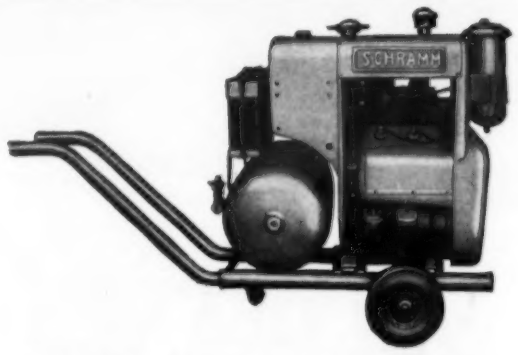
FOSTER PRECISION
HEIGHT GAGES
10" to 48"
Delivery from Stock

- EXTREMELY ACCURATE
- EXTRA HEAVY BASE AND BEAM
- LARGE ADJUSTABLE VERNIER 1.225 LONG
- LONG SLIDES
- FAULTLESS WORKMANSHIP
- IN BEAUTIFUL WOODEN CASE

also FOSTER 6" to 96" Precision Vernier CALIPERS

WRITE
FOSTER SUPPLIES CO.
6124 N. Milwaukee Ave., Chicago 30, Ill.

For more details circle NED-328 J3 on enclosed inquiry slip



Complete Engine Driven Compressor for Shop Maintenance

- TWO SIZES, 20 and 35 c.f.m. with electric push button starting.
- PAINTING—WATERPROOFING, spraying light, heavy, or roofing and caulking material.
- STEEL ERECTION, drilling, reaming, riveting, impact wrenches, grinders and many other tools.

Other Engine Driven models available in sizes including: 20—35—60—105—210—315—600 c.f.m.

WRITE FOR CATALOG 5101-A

SCHRAMM, INC.
the compressor people
WEST CHESTER, PA.

For more details circle NED-329 J3 on enclosed inquiry slip

ROLLWAY®
BASKET STACKS

THE NEW NAME IN MATERIALS HANDLING

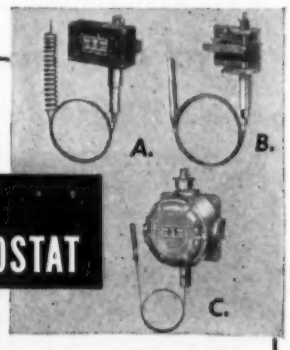
BASKET STACKS
with new features and favorably priced WIN WIDE APPROVAL AT MATERIALS HANDLING SHOW

- Safe, sturdy, durable—backed by manufacturer with 33 years experience making materials handling equipment.
- Stack-Lock design. Handles of each basket nest into handles of basket below locking stack safely together.
- Can be supplied with either caster dolly, or fork-lift pallet.
- Baskets, dollies or pallets supplied separately or in combinations, one or a thousand.
- Baskets made especially to suit your needs — any size, with dollies or pallets for single or multiple basket stacks.

Write today for literature and prices

HOFFMAN COMPANY
2588 W. PHILA. ST., YORK, PA.

For more details circle NED-323 J3 on enclosed inquiry slip



A. TYPE E5
B. TYPE F42
C. TYPE E98

AN ACCURATE ADAPTABLE THERMOSTAT

The type E5 thermostat is a precision-built temperature control which can be fitted with a wide variety of thermal assemblies and switches to suit the particular application. Temperature limits -150° F to +600° F.

The type E5 has been used on ovens, water baths, incubators, hot plate presses, cooling cabinets, air conditioning equipment, food and drink vending machines. Shown are three variations, the E5 covered by bulletin #3-2, Type F42 "skeleton" model covered by bulletin #3-3, and Type E98 in explosion-proof housing covered by bulletin #3-5. Write for information on the models of interest to you.

UNITED ELECTRIC CONTROLS COMPANY
81 School Street, Watertown, Mass.

STANDARD & SPECIAL THERMOSTATS & PRESSURE SWITCHES

For more details circle NED-327 J3 on enclosed inquiry slip

NEW AUTOSET

self-setting hold-down clamps
for presses and machine tools

GUARANTEED NOT TO BREAK!

No packing required—has 3 inter-related surfaces. Tools gripped, can't slip. Malleable castings. Washer attached, preventing misplacement. All sizes in stock.

EXACTO INDUSTRIES, INC.
150 So. Doheny Drive, Beverly Hills, Calif.
Phone BRadshaw 2-5321
Distributors for Northwest Hose Clamps

• • •

Since 1943—Manufacturers of aircraft clips and clamps conforming to latest AN specifications. Suppliers to airframe manufacturers in the U. S. and Canada Air Force and Navy Representatives in principal cities.

For more details circle NED-330 J3 on enclosed inquiry slip

Exactly how much weight do you throw?

Ten inch ounces or 2000 ft. lbs.? Whatever it is, it pays to know when tightening nuts, bolts, screws, or studs. And with Apco Mossberg Torque Wrenches you can know . . . instantly and precisely!

Like no other torque wrench of comparable size or style, an Apco Wrench measures the exact final tension on precision fasteners with the slightest pressure on the handle. Your dial readings are instantaneous and unerringly accurate . . . there are no springs or intricate parts to get out of order. Your work is made easier . . . large, quick-vision numerals and narrow heads simplify measurements in awkward places. Best of all, with Apco there's a wrench for every job in the shop — a complete range of sizes, from 280 inch grams to 2000 ft. pounds.

It pays to standardize with Apco Mossberg Torque Tools for Industry. Write today for complete details.

APCO MOSSBERG CO.
ATTLEBORO, MASS.

▲ For more details circle **NED-331 J3** on enclosed inquiry slip ▲

Specify **T-J** **FOR MORE WORK BETWEEN GRINDS**

In die and forge shops everywhere . . . T-J Die Sinking Milling Cutters are today's top favorites . . . because they're "tops" for cutting tough die steels! T-J Cutters hold a sharp edge longer on job after job . . . less breakage! Made from an extremely high grade steel . . . properly machined . . . scientifically heat-treated and accurately ground. Wide range of styles and sizes. Send for new catalog 150. The Tomkins-Johnson Co., Jackson, Mich.

FOR TOUGH JOBS SPECIFY T-J
TOMKINS-JOHNSON
RIVETORS . AIR AND HYDRAULIC CYLINDERS . CUTTERS . CLINCHERS

▲ For more details circle **NED-332 J3** on enclosed inquiry slip ▲

New WILLSON Kover-Mor goggles
with strong, light NYLON eye cups!

Style CW 70
For Welders — with Willson **Spatterproof®** cover glass over **Willson-Weld®** filter lens

STYLE CC 70
For Chippers — with Willson **Super-Tough®** lenses heat treated for extra protection

- New design provides ample room for large-frame prescription glasses
- Standard 50 mm. round lenses are easily replaced and quickly inserted
- Extra ventilation is provided by vents and ports safeguarded by screens
- Rigid metal top bar makes goggles easier to handle—more secure

Ask your Willson distributor for new Kover-Mor Welding Goggles —or write for new Bulletin.*

Over 300 safety products carry this famous trademark
WILLSON®
Established 1870

*Trademark

WILLSON PRODUCTS, INC., 219 Washington Street, Reading, Penna.

▲ For more details circle **NED-333 J3** on enclosed inquiry slip ▲

ALUMINUM STORAGE TANKS in 5800 and 16,400 gal capacities

Line of standardized horizontal and vertical tanks for storage of materials at atmospheric or low pressures is now available. Horizontal tanks as well as vertical types designed to be supported on six legs are offered in capacities of 6400, 11,400 and 16,400 gal. Vertical types designed to be supported on flat base are available in 5800, 10,800 and 15,800 gal capacities. All have 10-ft diameters and are made from ¼-in. welded 3-S aluminum alloy. All can be equipped with 20-in. ID manhole, either of swing or fixed type, of which latter will stand low pressures. Van Stone standard welded neck connections are optional. Made by **Aluminum Co. of America,** 1107 Alcoa Bldg., Pittsburgh 19, Pa.

▲ For more details circle **NED-334 J3** on enclosed inquiry slip ▲

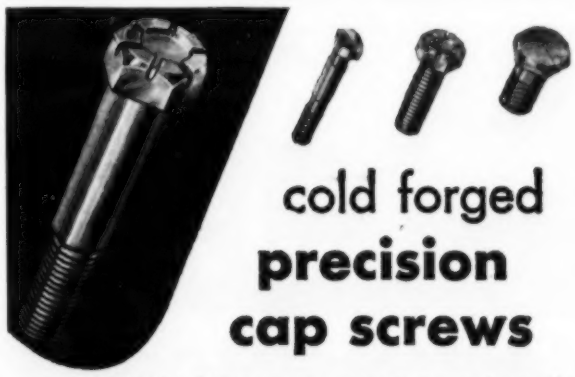
ROTARY WIRE STRIPPER may be bench or stand mounted

Limited to wires having a diameter not greater than 0.255-in. over the insulation, model G-5 rotary wire stripper uses a single blade that will not damage the bare wire and which is adjustable to 0.001-in. Stranded wires are twisted during the stripping operation, and precision guide bushings are provided to fit all wires to be stripped. Unit is mounted on a bench-height stand with foot treadle and plastic bag to catch insulation slugs, but it can be bench mounted. Stripping head is mounted directly on shaft of a 1/20-hp motor with reversing switch. If desired, it is available on a rental/purchase plan. Made by **Eraser Co.,** Rush Wire Stripper Div., 1080 South Clinton St., Syracuse 4, N. Y.

▲ For more details circle **NED-335 J3** on enclosed inquiry slip ▲

DO YOU KNOW? Wire rope ranging in diameter from ⅛ to 1½ in. is now available accurately marked at 5-ft intervals with a Redi-Measured band of gold. This marking enables users of wire rope to measure quickly the required footage for any application. Rope can also be marked to user's specifications calibrated in feet or fathoms. System developed by Paulson-Webber Cordage Corp., 164 John St., New York 7, N. Y.

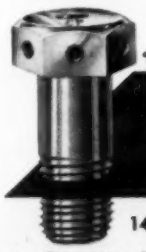
▲ For more details circle **NED-336 J3** on enclosed inquiry slip ▲



cold forged precision cap screws

CHANDLER fasteners are manufactured from the highest quality steel, selected to meet requirements of load or stress encountered in service. They are precision formed to exact specifications to insure accuracy and quality. This uniform high quality makes assembly faster, and smoothly finished heads assure good appearance of completed assemblies.

CHANDLER specializes in the manufacture of cold forged metal fasteners for the automotive, aviation, transportation and farm implement industries. For complete uniformity and accuracy of production, specify **CHANDLER.** 1305-CH



Specialists in Thread-Rolling After Heat Treating

CHANDLER PRODUCTS CORPORATION
1495 Chardon Road • Cleveland 17, Ohio

▲ For more details circle **NED-337 J3** on enclosed inquiry slip ▲

Send for Nicholson

FLOAT BULLETIN 753

Complete Data on Welded Floats: Diagrams, Tables, Formulae for Calculation of Buoyancies

The booklet is a standard reference for specifiers of welded floats. Nicholson furnishes any type: for external or internal pressures; in stainless steel, Monel, chromium, cadmium or copper-plated steel. Sizes, 2" to 14" diam., press. to 4800 lbs.; standard or special connections. Quick delivery on many sizes and shapes. Nicholson floats are standard with hundreds of manufacturers.

W. H. NICHOLSON & CO.
TRAPS · VALVES · FLOATS
162 Oregon St., Wilkes-Barre, Pa.

▲ For more details circle **NED-338 J3** on enclosed inquiry slip ▲

You can inspect long parts at all magnifications . . . with the Kodak Contour Projector

This seven-inch-long cycle timing part must be inspected for tooth contour, location and spacing of two cams, shaft diameter, shoulder spacing, and form, size, and runout of the lead screw. All these dimensions may be quickly checked on the Kodak Contour Projector. That's because the Kodak Contour Projector provides an unvarying 8" clearance between lens and object at all magnifications.

The exceptional versatility of the Kodak Contour Projector permits this part to be completely inspected in six positions, at several different magnifications, and using both surface illumination and silhouette projection. And the job requires little training, is done quickly and easily.

Whether for toolroom use or production assembly and inspection, you'll find a Kodak Contour Projector will get the work out in a hurry. With an appropriate chart-gage and fixture you can inspect all sorts of complex parts, large and small. There is a field representative in your area who will answer your questions. To get in touch with him, or for a copy of a new booklet, "Kodak Contour Projector," write to:

Special Products Sales Division
EASTMAN KODAK COMPANY, Rochester 4, N. Y.

Optical Gaging

the KODAK CONTOUR PROJECTOR

A new sound movie, Optical Gaging, shows how to simplify complex inspection problems. We'll tell you how to get it for a showing.

Kodak TRADE-MARK

▲ For more details circle **NED-339 J3** on enclosed inquiry slip ▲

Meet code requirements with

T & B INSULINERS

protect cables where they need it most

Ideal for both new or old work, T & B Insuliners prevent cable abrasion due to burred or unevenly cut conduit or E.M.T. Made of specially-processed fibre, they insulate any outlet.

Patented T & B Insuliner sleeves slip over cable and snap easily into non-insulated bushings, connectors or nipples—no tools are needed. Available for conduit sizes ½" to 6". Spring tension holds Insuliner firmly in place. Deep body groove locks behind lip of fitting and guards against accidental removal. Long skirt shields conduit end and provides a smooth, insulated interior surface even if the conduit is burred, uneven, or a little too short.

For lower installation costs and faster inspection approval, make it a point to standardize on T & B Insuliners. For complete details send for Data Sheet H2. T 314

THE THOMAS & BETTS CO.
Incorporated
24 Butler Street, Elizabeth 1, New Jersey
Thomas & Betts Ltd., Montreal, P.Q., Canada
MANUFACTURERS OF FINE ELECTRICAL FITTINGS SINCE 1898

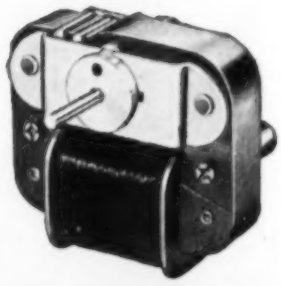
▲ For more details circle NED-340 J3 on enclosed inquiry slip ▲

BARBER COLMAN

Barcol®

Small Motors

Oster Hair Vac massages, cleans in one operation ...powered with Barcol Small Motor



Made especially to give a *dry* shampoo, the Hair Vac; product of John Oster Manufacturing Company, Racine, Wisconsin, cleans while it massages.

Vibrating rubber fingers give a massage which loosens dirt, dust and dandruff scales that are then vacuumed into a disposable filter. Operation of the unit calls for a motor that is capable of carrying an unbalanced load while powering a blower at high running speed. To do this, Oster standardizes on the Barcol type DYAB small motor specially adapted to the Hair Vac's requirements.

"Plus" features of this Barcol motor are: low power consumption . . . lightweight . . . rugged construction . . . hardened and ground stainless steel shafts . . . porous bronze bearings . . . generous oil reservoirs.

This Hair Vac application again shows how Barber-Colman engineers can help solve an unusual design-production problem with the *exact* motor for the job. When you have a project involving small motors, let Barber-Colman work it out with you.

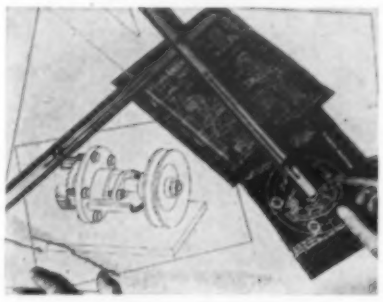
FREE DATA SHEETS ON WIDE LINE OF SMALL MOTORS

The Barcol line includes unidirectional, synchronous, and reversible motors—up to 1/30 h.p. With and without reduction gearing—open or enclosed types. Expert engineering service available. Write today, tell us your problem, ask for free data sheets.

BARBER-COLMAN COMPANY, DEPT. I, 1214 ROCK ST., ROCKFORD, ILL.
Small Motors • Automatic Controls • Industrial Instruments • Aircraft Controls • Air Distribution Products • OVERdoors and Operators • Molded Products • Metal Cutting Tools • Machine Tools • Textile Machinery

▲ For more details circle NED-341 J3 on enclosed inquiry slip ▲

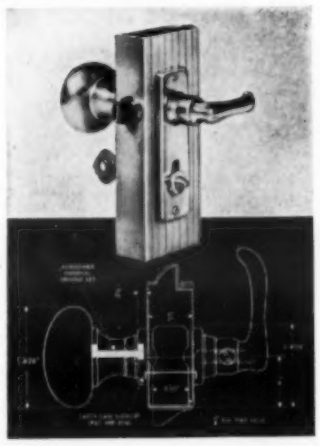
DRAWING INSTRUMENT makes perspective views from print



By tracing normal orthographic views of an object, the Adapto-Arm produces pictorial drawings in either isometric, dimetric or trimetric perspective. Construction is simple, the device having only three moving parts, and a high degree of accuracy can be maintained. It is easy to use. In addition to its use as an axonometric drafting machine, the unit performs many other functions. It will extend or condense a line of lettering simply by tracing, and will draw an accurate ellipse of any size or shape up to 20 in. The illustration shows an almost completed trimetric drawing being taken from a blueprint. Made by **Wilkinson Co.**, Dept. 19, Box 638, Arnold, Md.

▲ For more details circle NED-342 J3 on enclosed inquiry slip ▲

COMBINATION DOOR LOCK is practically burglarproof



For use on metal combination screen and storm doors, this lockset has backset of only ⅞-in. It is virtually burglarproof, and the knob is fastened to its spindle by steel key (shown white in drawing) rather than by screws or rivets. This key fits into a slot in the spindle and is adjustable for door thickness. A latch case support ensures that the latch bolt tube is held rigidly in place, while the tube itself is staked so that the latch bolt cannot protrude excessively even if door or frame is distorted. Even if the outside knob is completely sawn off, the door remains locked and cannot be opened. Lock is designed for easy installation. Made by **Independent Lock Co.**, Dept. A, Fitchburg, Mass.

▲ For more details circle NED-343 J3 on enclosed inquiry slip ▲

DO YOU KNOW? "Full Power Ahead" is a complete promotional kit which contributes to the electrical industry's counterattack against obsolescent wiring. Program is intended to aid contractors, electrical distributors and utilities in promoting extended use of electricity through rewiring of all types of establishments and industrial plants. Brochure is available by writing to Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.

▲ For more details circle NED-344 J3 on enclosed inquiry slip ▲

NEW COLD WOOD GLU SETS IN 20 MINUTES!

A Better All-Purpose Industrial Glue

WOOD GLU is a very strong, *fast-setting new* COLD liquid Resin Glue . . an outstanding Paisley scientific development. Now you can bond, *in 20 to 30 minutes*, many different materials heretofore impossible to join with ordinary Wood Glues.

Paisley WOOD GLU is ideal for industrial wood joining operations. Also for faster assembly gluing and bonding of laminated plywood, paperboard, fabrics, leather and similar porous materials. Use it as received, with flow guns, brushes, spreaders. Mail the coupon order form below for trial shipment, on approval!

Gentlemen: Ship on approval, f. o. b. Chicago or New York, the WOOD GLU indicated below:
____ cases 12/qts. @ $2.10 qt. ____ cases 4/1 gals. @ $6.00 gal. ____ 5 gal. cans (bulk) @ $5.50 gal.

Paisley ADHESIVES

Name _____

Address _____ **City** _____ **State** _____

PAISLEY PRODUCTS INCORPORATED
Division of MORNINGSTAR, NICOL, INC.
1770 CANALPORT AVENUE, CHICAGO 16, ILLINOIS • PHONE CANAL 6-2219
630 WEST 51st STREET, NEW YORK 19, N.Y. • PHONE COLUMBUS 5-2860
Manufacturers of Glues, Pastes, Resin Adhesives, Cements and Related Chemical Products

▲ For more details circle NED-345 J3 on enclosed inquiry slip ▲

penco LOCKER LOCKS ITSELF!

UNIQUE PATENTED FEATURE!

Penco Steel Lockers are equipped with the finest automatic locking device—a feature that "forgives" forgetfulness, prevents thefts, permits authorized locker inspection without occupant's presence! Penco's 2-WAY ACTION gives choice of automatic or manual locking—a feature you'll want!

A Complete Line of Steel Lockers—Send for Catalog

PENN METAL Corporation of Penna.
85th YEAR OF SERVICE
82 OREGON AVE., PHILA. 48, PA.

▲ For more details circle NED-346 J3 on enclosed inquiry slip ▲

Thomas JAK-TUNG One-Handling System

TRUCKS & STORES LOADS WITHOUT UNLOADING

This double-purpose truck is designed for use with power truck or hand lift. When loads are to be moved long distances, a power lift platform or fork lift truck is used. For short hauls, spotting of loads and handling in close quarters, the JAK-TUNG Lift Unit is best. Either way loads can be trucked and stored without costly rehandling. Available with chemical resistant tires and "Job Suited" superstructures.

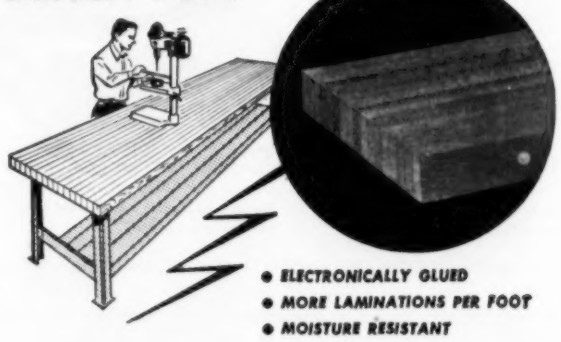
Send for free literature.

THOMAS TRUCK & CASTER CO.
365 Mississippi River, Keokuk, Iowa

▲ For more details circle NED-347 J3 on enclosed inquiry slip ▲

LAMINATED BENCH TOPS

● *NOTHING—BUT NOTHING TOPS A TOLCO BENCH TOP!*



- *ELECTRONICALLY GLUED*
- *MORE LAMINATIONS PER FOOT*
- *MOISTURE RESISTANT*

Tolco Northern Maple, laminated assembly bench tops are built by the originators of electronic gluing. Skilled craftsmen blend their talents with the finest quality lumber available to bring you the supreme product in the laminated bench and table top industry. Tolco tops have more laminations per board foot than any other giving them superior strength and resistance to wear and tear. Special processing makes Tolco tops especially resistant to moisture and warpage. Write today for full color catalog illustrating and describing this outstanding product. Prices on request.

THE TOLERTON COMPANY
P. O. Box D 658 Alliance, Ohio
Established 1894

▲ For more details circle NED-348 J3 on enclosed inquiry slip ▲

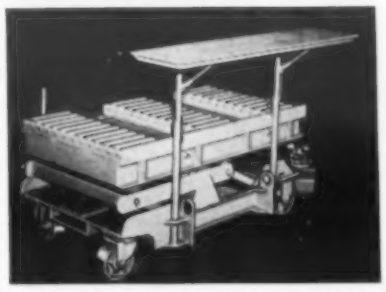
★ This Webber test unit, designed for production and experimental testing, has a temperature range from +250°F., to −100°F. The pull-down to −100°F., is achieved in 45 minutes, and can be cycled from −100°F., to +250°F., in 30 minutes. 95% relative humidity is provided at temperatures between 75°F., and 95°F. Vacuum equipment can be added to simulate high altitudes. The test chamber, provided with a moisture-proof light for illumination, is 4½ cubic feet, 20 inches high, 20 inches wide, 20 inches deep. High and low temperatures are governed by a temperature controller with scale range from −200°F., to +400°F., with a 3 degree control point differential, 1½ degrees plus and minus. The humidity is regulated by a wet and dry bulb controller. Unit size is 60" long, 45" wide, 74" high. Apertures in left side of cabinet provide for electrical cables to energize equipment being tested. Webber offers a complete line of test units for various applications.

Write for more complete information

INDUSTRIAL FREEZER DIVISION
WEBBER MANUFACTURING COMPANY, INC.
(Formerly Webber Appliance Co., Inc.)
2749 MADISON AVENUE · INDIANAPOLIS 3, INDIANA

For more details circle NED-349 J3 on enclosed inquiry slip

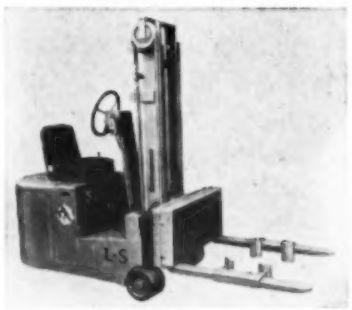
SHEET FEEDING TABLE
permits continuous feeding of strip



Steady flow of strip steel through punch press is facilitated by this roller top feeding table with feed shelf. Table, on which can be placed two bundles of 15 x 17-in. strip, is hydraulically elevated so that top sheet of inside bundle is slightly above fixed height shelf. Sheets are transferred from pile onto shelf and fed lengthwise into press. When inside bundle is gone, table is lowered and outside bundle moved forward to start another feeding cycle. Shelf has pin adjustments for different bed heights. Elevating 5-ton capacity table is powered by hydraulic foot pump, and is fitted with large casters for positioning and with lugs for overhead crane movement. Made by **Raymond Corp.**, 41111 Madison St., Greene, N. Y.

For more details circle NED-351 J3 on enclosed inquiry slip

HYDRAULIC CLAMPING FORKS
facilitates handling drums, barrels



A practical attachment for handling drums or barrels by means of clamping pressure, hydraulically adjustable clamping forks can be placed on any Lewis-Shepard SpaceMaster fork truck from 1000 to 4000-lb capacity or JackStacker high-lift walkie model. Curved cut out on inside of each fork is sufficient to hold drum in position. For drums and barrels without sufficient sidewall strength, slip-on clamping pads are available. These distribute pressure over large enough area to prevent crushing of drums. Made by **Lewis-Shepard**, Dept. R-27, Watertown 72, Mass.

For more details circle NED-352 J3 on enclosed inquiry slip

DO YOU KNOW? Approximately 350 manufacturers and distributors of equipment, materials and services to simplify and promote economy in industrial plant maintenance and engineering will be displayed in over 100,000 square feet of exhibit space at the Chicago International Amphitheatre during the week of Jan. 25-28, 1954. Concurrent with the Plant Maintenance and Engineering Show will be a well planned technical conference at the Hotel Conrad Hilton. Advance registration cards can be obtained from Clapp & Poliak, Inc., 341 Madison Ave., New York 17, N. Y.

For more details circle NED-353 J3 on enclosed inquiry slip

GRIPPING FORCE 15 TIMES AIR LINE PRESSURE

Speedy Air Vise helps you do dozens of operations faster, better, cheaper—by air pressure! Foot control valve opens and shuts vise instantly, leaving *both* hands free to produce *more!* Jaw opens up to 3 inches, holds castings, parts, jigs, etc. Compact and trouble-free.

Complete with Foot Control, Air Hose and Fittings.....only **$36.00**

Prompt Delivery from Your Supplier or Write Direct

W. R. BROWN CORPORATION • 2647 N. Normandy Ave. • Chicago 35, Ill.

AIR REGULATORS • AIR FILTERS • AIR GUNS • PORTABLE COMPRESSORS

For more details circle NED-355 J3 on enclosed inquiry slip

In SHOP BOXES little things make a BIG difference!

STYLE A

...you'll benefit from these UNION METAL advantages

- **Built-In Wear Runners** give years of extra wear at no extra cost.
- **One-Piece Bottom and Ends** for added strength where it's needed most.
- **14-Gauge One-Piece Drawn Angle Corners,** more sturdy than the conventional **flat strips.**
- **Flexible Tooling** permits special box dimensions without premium prices.
- **Prompt Shipment** on all common and unusual types of steel shop boxes.

Send for Bulletin MH-807A for information and dimensional data. Address The Union Metal Manufacturing Company, Canton 5, Ohio.

UNION METAL
Material Handling Equipment

For more details circle NED-356 J3 on enclosed inquiry slip

It's no wonder why so many industries

Choose American

the most economical and practical

STORAGE RACKS

Heavy Duty American Skid Rack Installation, Warner & Swasey Co., Cleveland, Ohio

American

SKID RACKS

American Skid Racks are made in any size, with any underclearance, and can be erected without bolting or welding. Three types are available:

1—Standard Tubular
2—Heavy Duty
3—Extra Heavy Duty

Tiering your skids saves space . . . saves time in handling stock . . . saves time taking inventory . . . everything is always in sight.

Send for Catalogue

AMERICAN METAL PRODUCTS CO.

STORAGE RACK DIVISION
5959 Linsdale • Detroit 4, Michigan

For more details circle NED-350 J3 on enclosed inquiry slip

For more details circle NED-354 J3 on enclosed inquiry slip

QUICK, EASY WAY TO STOP LEAKS

Dry Up DAMP, CLAMMY BASEMENTS!

Leaks in concrete walls, masonry, cinder block, etc., can be stopped quickly with FLEXTITE. Actually seals against water pressure. Efficient as a trowel coat for sealing off water and dampness. Transforms leaky basement walls into dry surfaces. Used in elevator pits, tunnels, dams, tanks, retaining walls, etc. (Minimum quan. 6 gal.)

MAIL COUPON for TRIAL OFFER

FLEXTITE

FLEXROCK COMPANY • *Offices in Principal Cities*
3603-F Filbert St., Philadelphia 4, Pa.

Please send me complete FLEXTITE information and details of TRIAL ORDER PLAN—no obligation.

Name ..... Title .....
Company .....
Address .....

For more details circle NED-357 J3 on enclosed inquiry slip

NEW

better way of detecting gas or vapor flow

Bulletin describes operating principle of Fenwal DETECT-A-FLO

If detection of change of air flow, gas, or vapor past a given point is important to you, then you will want to know more about the new Fenwal DETECT-A-FLO unit.

The device contains a constant heat source and operates on a heat transfer principle. The electrical contacts of a basic Fenwal THERMOSWITCH® element are actuated whenever there is a change in the rate of flow beyond the set point. Easy to install, ambient compensated, hermetically sealed, compact, resistant to vibration and corrosion — has no exposed moving parts.

The newly developed Fenwal DETECT-A-FLO will bring improved dependability in applications where detection or control of flow is vital. Can be used in tandem to meter flow as well. Comprehensive engineering data is ready now. For more information, send now for your free copy of bulletin. Write **Fenwal Incorporated, 89 Pleasant Street, Ashland, Mass.**

Fenwal **DETECT-A-FLO**

Electric Temperature Control and Detection Devices

For more details circle NED-358 J3 on enclosed inquiry slip

Less Fatigue More Production WITH **KELLER** AIR TOOLS

Keller Pneumatic Grinders are built for heavy production grinding . . . they combine great power and light weight. A built-in governor maintains constant speed — saves wear on grinding wheels. Keller also makes die grinders and vertical grinders.

Light weight and balance

Direct drive air motor

Low air consumption

Less fatiguing to operator

Send for illustrated descriptive bulletin and detailed information

Keller Tool Company

GRAND HAVEN, MICHIGAN

For more details circle NED-359 J3 on enclosed inquiry slip

TWO EASY WAYS TO GET COMPONENTS IN LARGE QUANTITIES

The first way is to make them yourself—of easily-machined Synthane laminated plastics. The second way is to let us make them for you—of the same light-weight, strong, hard, dense, chemically-resistant, dielectric material. We have the experience and facilities for fast, large-scale fabrication of parts. The coupon will bring you complete information.

SYNTHANE

Manufacturers of laminated plastics

SHEETS
RODS • TUBES
MOLDED-LAMINATED
MOLDED-MACERATED
FABRICATED PARTS

SYNTHANE CORPORATION
N. E. River Road, Oaks, Pa.

Gentlemen:
I'd like to know more about Synthane laminated plastics. Please send your catalog to . . .

Name_____
Address_____
City_____ Zone____ State____

For more details circle NED-360 J3 on enclosed inquiry slip

PORTABLE PNEUMATIC RIVETER works on spin riveting principle

Only slight steady pressure is required for proper operation of Airflex model SP portable pneumatic riveter which works on spin riveting principle. Tool weighs 7 lb and is 15 in. long. Straight-line pneumatic hammer strikes against pneumatic - rotating peen distributing impacts around the rivet head. Valve enables operator to regulate force and rapidity of blows, as well as spinning speed of peen. Three sizes to handle 1/8 to 5/16-in. rivets are available. Made by **Lemert Engineering Co.**, 203 Jefferson St., Plymouth, Ind.

For more details circle NED-361 J3 on enclosed inquiry slip

END MILL ADAPTER reduces end milling setup time

Standardized for No. 50 N.S. drive milling machines, heavy duty adapter with auxiliary equipment holds 2-in. straight shank end mills, in addition to special and standard shell end mill arbors and end mill holders. Adapter mounts directly on front spindle flange and does not require draw-in bolt. Four bolt holes and key slots provide for rigid mounting and positive drive. Two set screws firmly hold straight shank heavy duty end mills and auxiliary equipment. All locating surfaces are finish ground parallel and concentric for true mounting and accurate cutting. Made by **Goddard & Goddard Co.**, 12284 Burt Rd., Detroit 23, Mich.

For more details circle NED-362 J3 on enclosed inquiry slip

DO YOU KNOW? The first historical record of dimensions and properties of all iron and steel rolled shapes of the past 79 years will be published in a 150-page well-illustrated volume entitled "Iron and Steel Beams, 1873 to 1952." Compiled through the co-operation of rolling mills, structural steel fabricators, engineers, railroads and technical libraries, information is invaluable to all concerned with rolled shapes. Price is $3.50. Published by American Institute of Steel Construction, 101 Park Ave., New York 17, N. Y.

For more details circle NED-363 J3 on enclosed inquiry slip

CMH REX-FLEX

HIGH PRESSURE
CORROSION RESISTANT
FLEXIBLE METAL HOSE

Stainless steel Rex-Flex is corrugated metal hose designed to convey a wide range of searching liquids or gases at high temperatures. Although light in weight, it is extremely durable and flexible and absorbs prolonged cycles of vibration, flexation and vari-plane motion. Rex-Flex is fabricated in both annular and helical convolutions in a wide range of sizes, complete with fittings.

Write for complete data

CHICAGO METAL HOSE
DIV. FLEXONICS CORPORATION
1343 S. Third Avenue, Maywood, Illinois
Manufacturers of flexible metal hose and conduit, expansion joints, metallic bellows and assemblies of these components.
In Canada: Flexonics Corporation of Canada, Ltd., Brampton, Ontario

CMH

For more details circle NED-364 J3 on enclosed inquiry slip

Easy to use . . . Easy to clean . . . Easy to service

DERBY SEALER MODEL 32 GUMMED TAPE DISPENSER

For Shipping Room and Production Line Packaging

- Rugged simplicity aptly describes the Model 32. Derby's exclusive, one-piece solid casting eliminates parts and provides added rigidity. What's more, the Model 32 is easy to clean, even during the hot summer months when machines tend to "gum-up."
- The Derby Model 32 accommodates any tape from 1" to 3" wide. Delivers from 4 inches to 34 inches of tape at one stroke.
- Derby's exclusive "moisture-control" system maintains a maximum high water level in the tank to assure a constant supply of water to the brush, no matter how fast tape is dispensed.
- Also available is the Model 32-T with tool steel shear-type blades for cutting reinforced strapping tapes. Blades have two cutting edges to double their useful life before resharpening.

For further information, write Dept. NED

DERBY SEALERS, INC.
Derby, Connecticut

For more details circle NED-365 J3 on enclosed inquiry slip

NEW COST-SAVING INFORMATION!

for —
- Architects
- Consulting Engineers
- Contractors
- Plant Engineers
- Power Engineers
- Building Managements

If you're concerned in any way with specifying, selecting, installing, operating or maintaining boilers for any kind of plant or building, you'll want this new bulletin describing the latest cost-saving features of

Powermaster®
PACKAGED AUTOMATIC BOILERS

Then compare *Powermaster*, feature by feature, with any other packaged boiler and you'll see why it's today's best buy in automatic steam generation. For example, only *Powermaster* now guarantees 83% *minimum* efficiency with No. 6 oil! That means real fuel economy.

SEND FOR BULLETIN 1219 NOW...
on your company letterhead, telling us your steam requirements and operating conditions.

ORR & SEMBOWER, INC.

930 Morgantown Road, Reading, Penna.

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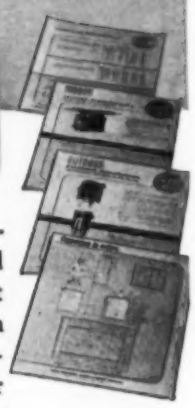
NEW
DIMENSION SHEETS Give Complete Information

ALLIS-CHALMERS
INSTRUMENT TRANSFORMERS



Just off the press — all the mechanical and electrical information you need in a convenient, completely bound set of data sheets. Gives most thorough presentation of entire line of Allis-Chalmers instrument transformers ever published. Get your copy from your nearest A-C district office or write:

A-4113

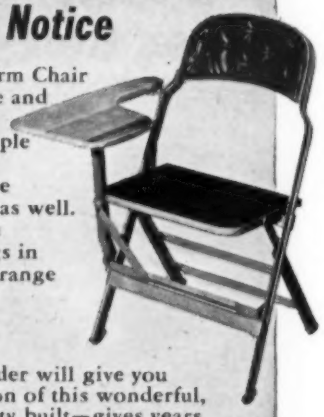
Allis-Chalmers, Milwaukee 1, Wis.

ALLIS-CHALMERS

For more details circle NED-367 J3 on enclosed inquiry slip

Learn about Amazing New Office Space Stretcher

DOUBLE Seating and Table Space *at a Moment's Notice*

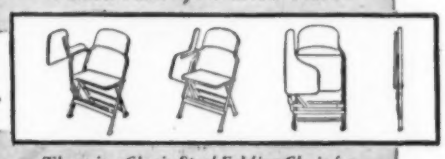


The new Clarin Tablet Arm Chair that Folds combines table and chair in one. You'll be amazed at how many people you can seat comfortably in a small office—and give each of them table space as well. Thus, you can hold those important group meetings in almost any office—and arrange for it in a few moments.

WRITE TODAY!

Our FREE illustrated Folder will give you full details and description of this wonderful, space-saving chair. Quality built—gives years of service—folds to flat 3-inch depth for fast, safe stacking in minimum space. An engineering gem—others are trying vainly to imitate it. Foam rubber cushioning if desired. Write for *free* folder today!

FOLDS FLAT IN 3 EASY STEPS



Clarin Mfg. Co.,
Dept. 15,
4640 Harrison St.,
Chicago 44, Ill.

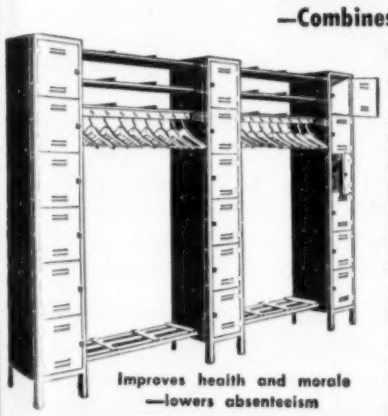
Clarin — *There is a Clarin Steel Folding Chair for your every need. New FREE Catalog of complete line on request.*

ENGINEERED QUALITY MAKES THE BIG DIFFERENCE IN FOLDING CHAIRS

For more details circle NED-368 J3 on enclosed inquiry slip

VALET RACKS

LOCKERETTE
—Combines the best features of both lockers and coat racks



Improves health and morale —lowers absenteeism

Wraps are exposed to air and light. Employees do not face the weather in damp wraps that have been crumpled in dark lockers—do not eat soggy lunches, soaked by wet hats or gloves. Each person has his own spaced coat hanger, ventilated hat shelf and 12" x 12" x 15" deep lock box for lunches, tools and personal effects.

Lockerettes save space too . . . the No. 6-12 (2-column) accommodates 12 people in 6 ft; the No. 9-18 (illustrated) accommodates 18 in 9 feet.

Write for Bulletin No. OL 8

VOGEL-PETERSON CO.
1121 West 37th St. • Chicago 9, Ill.

For more details circle NED-369 J3 on enclosed inquiry slip

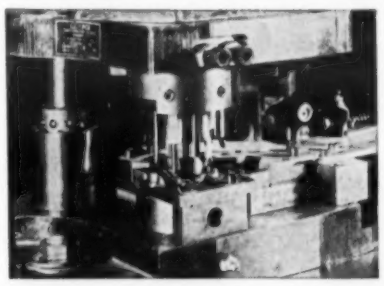
REFRIGERATION SERVICE OUTFIT features sensitive leak detector and heating and brazing tools

All equipment for accurate leak detection as well as heating and brazing of refrigeration and air-conditioning systems is included in this portable, all-purpose Prest-O-Lite servicing kit. Leaks of such gases as F-11, F-12, F-21, F-113, F-114 and Carrene are quickly located by Halide leak detector stem as are methyl bromide vapors in air, where such concentrations are less than 10 per cent. Detector shows up as little as 20 parts of refrigerant gas in million parts of air.

Three torch stems, provided for open flame soldering, heating and bending requirements, fit interchangeably into No. 401 handle with built-in "gas-miser" pilot flame control. Outfit includes R-411B acetylene regulator and 12½ ft of 3/16-in. hose. Steel carrying case holds complete outfit with ample room for wrenches and other small tools. Made by **Linde Air Products Co.**, Room 308-NED, 30 E. 42nd St., New York 17, N. Y.

For more details circle NED-370 J3 on enclosed inquiry slip

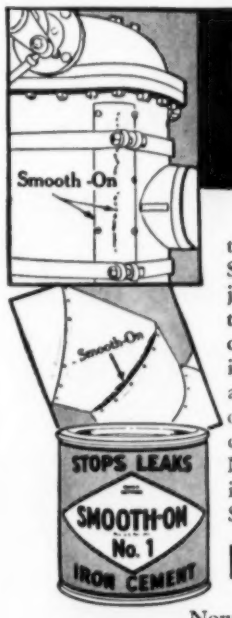
TURRET-TYPE DIE FEED produces complex stampings in continuous automatic progression



Designed to produce complex stampings in one continuous progression through a die, automatic turret feed can eliminate secondary forming operations and reduce handling time. Strip material is fed in conventional manner, and all piercing and blanking is done as it progresses though the die. When the piece is directly over one of the turret stations, it is separated and nested in the turret feed. On each press stroke, turret on the lower die shoe indexes, and tools form, draw, shape and notch the part as it revolves. It is finally completely formed at the last station and ejected.

Required number of stations depends on part design, while size of turret feed is determined by the dimensions and shape of the stamping. The turret spline shaft and indexing mechanism is standard in one size, but special units can be furnished to suit the particular job. Made by **Dixon Research, Inc.**, 2306 23rd Ave., Rockford, Ill.

For more details circle NED-371 J3 on enclosed inquiry slip



Repairs both Cast and Sheet Metal

The quick-hardening, fast-clinging, temperature-resistant properties of Smooth-On No. 1 Iron Cement make it just right for countless repairs in industrial plants, shops, homes. It seals cracked castings, stops leaks in breeching, tightens loose rivets, bolts, screws and machine parts. Does not require use of heat or "gadgets". Any handy man can use it successfully. Buy Smooth-On No. 1 in 1- 5- or 20-lb size and keep it handy. If your supply house hasn't Smooth-On, write us.

FREE Famous Repair Handbook

Now in its 28th edition, this 40-page, fully illustrated, pocket-size manual shows many short-cut, time-saving, money-saving repairs to machinery, equipment, pipe lines, etc. Drop us a line for YOUR free copy.

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SO-292

Do it with **SMOOTH-ON**
THE IRON REPAIR CEMENT OF MANY USES

For more details circle NED-372 J3 on enclosed inquiry slip

NEW
better way of maintaining accurate liquid level

Bulletin describes operating principle of Fenwal DETECT-A-FLO

If accurate, fool-proof maintenance of liquid level (within .1") is important to you, then you will want to know more about the Fenwal DETECT-A-FLO unit.

No gauges, no floats, no exposed moving parts. Instead, the device contains a constant heat source, and operates on a heat transfer principle. It employs a Fenwal THERMOSWITCH® element which is actuated whenever there is a rise or fall of liquid level beyond the point where the unit is placed. Ambient compensated, hermetically sealed, it is compact and resistant to vibration and corrosion. Easy to install, nothing to wear, out, to stick, or clog!

The newly developed Fenwal DETECT-A-FLO will bring improved dependability and accuracy in problems of liquid-level maintenance. Complete engineering data is ready now. For more information, send for your free copy of bulletin. Write **Fenwal Incorporated, 89 Pleasant Street, Ashland, Mass.**

Fenwal DETECT-A-FLO
Electric Temperature Control and Detection Devices

For more details circle NED-373 J3 on enclosed inquiry slip

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which
SOLID TIRE
for your product?

Monarch cushion tires of tough, wear-resisting stock have high capacity for absorbing shock and cushioning fragile loads over rough surfaces; excellent for high lift stability.

Monarch industrial tires are supplied on wheels by a majority of wheel and hand truck manufacturers.

For applications requiring extra traction, this tire is the first in its field.

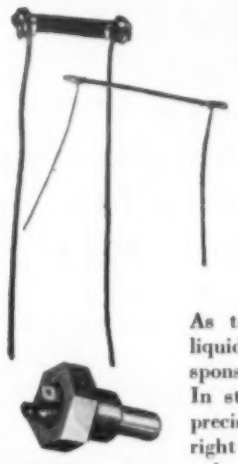
Designed for low ton mile cost, this tire is particularly efficient on high lifts where sway is a factor.

The groove tire, used primarily on large industrial trucks and trailers, rounds out the complete Monarch line of solid industrial tires.

MONARCH makes the complete line of solid industrial tires

THE MONARCH RUBBER COMPANY
501 Lincoln Park
Hartville, Ohio

For more details circle NED-374 J3 on enclosed inquiry slip



Used in this typical application for sensing temperature of hydraulic oil.

just right for your job!

BENDIX-FRIEZ high-precision thermistors

As temperature measuring elements and liquid level sensors, these temperature responsive resistors are the best you can buy. In standard or special types, their high-precision manufacture makes them precisely right for your job when it comes to resistance values, size, temperature coefficient, mountings and quality. Ask us about applications.

STANDARD TYPES FOR IMMEDIATE DELIVERY

Size (inches)	@ +30°C.	@ 0°C.	@ −30°C.
.140 x .75	45.0 ohms	86 ohms	194 ohms
.040 x 1.5	12,250 ohms	26,200 ohms	65,340 ohms
.018 x 1.5	35,000 ohms	82,290 ohms	229,600 ohms

Write for details.

FRIEZ INSTRUMENT DIVISION of Bendix Aviation Corporation

1444 Taylor Avenue, BALTIMORE 4, MARYLAND

Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.

For more details circle **NED-375 J3** on enclosed inquiry slip

—Wherever you need them!

STACKBIN® sections will give you a stockroom wherever you want it—quickly and easily as building a sectional book case. These patented sectional storage bins nest together without the use of tools—cost you nothing to build, nothing to move. Find out today how STACKBINS can lower YOUR handling costs.

IMMEDIATE SHIPMENT

Manufactured and sold in Canada exclusively by Wickware-Stackbin, Ltd., Ottawa

Write Stackbin Corp., 1081 Main St., Pawtucket, R. I.

STACKBIN SYSTEM *"Stacked and Still Accessible"*

For more details circle **NED-376 J3** on enclosed inquiry slip

quick to stick no need to lick!

AVERY Kum-Kleen self-adhesive LABELS

THE EASIEST AND MOST ECONOMICAL LABEL YOU CAN USE!

- TRADEMARKS
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- INSTRUCTIONS
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SAVE YOU TIME - MONEY!

An Avery label specialist will gladly explain how you can use Kum-Kleen pressure-sensitive labels profitably in YOUR business. Mail the coupon now for complete facts.

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☐ Please send case histories and samples
☐ Tell us about your electric label dispenser
☐ Have the local Avery man call

Name _____
Title _____
Company _____
Address _____

For more details circle **NED-377 J3** on enclosed inquiry slip

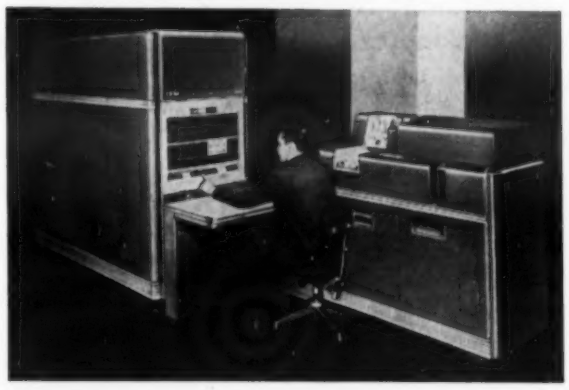
STANDARD RECTIFIERS have from 3 to 50 kw ratings

Now available from stock, standard rectifier units have from 3 to 50 kw ratings at 125 or 230-v dc output and either fixed or variable voltage direct current units to accommodate any alternating current voltage or frequency input. Also available on request are standard input voltages at 60 cycles. Units operate at the flick of a switch, and require no warm-up period or maintenance. Made by **American Rectifier Corp.**, 95 Lafayette St., New York, N. Y.

For more details circle **NED-378 J3** on enclosed inquiry slip

ELECTRONIC CALCULATOR designed for commercial use incorporates memory device

Meeting accounting and computing requirements between those served by the "giant brains" and smaller standard units, the Magnetic Drum Calculator com-



bines in conventional punched card equipment both high speed reading capacity and a memory circuit. A typical application is the simultaneous computation of insurance premiums and the calculation of required reserves.

Unit occupies approximately the same space as two ordinary office desks and a filing cabinet and can accumulate 10-digit numbers to form a 20-digit total at the rate of 200 per second. It is specially equipped to facilitate the automatic searching of rate tables occurring in the utilities, insurance, transportation and other commercial fields. Made by **International Business Machines Corp.**, Dept. JBD-1, 590 Madison Ave., New York 22, N. Y.

For more details circle **NED-379 J3** on enclosed inquiry slip

Quick as a wink measure both AC and DC

WITH A COLUMBIA TONG TEST AMMETER

(Voltage attachment available)

- Both AC and DC ampere readings are made instantly and accurately without breaking circuit or scraping insulation
- Operated with one hand by merely clamping tongs around conductor
- Cannot burn out
- Scale ranges up to 1000 amperes AC or DC
- Voltage attachment reads up to 600 volts
- Five types to accommodate cables up to 3⅞", bus bars up to 4½"x½"

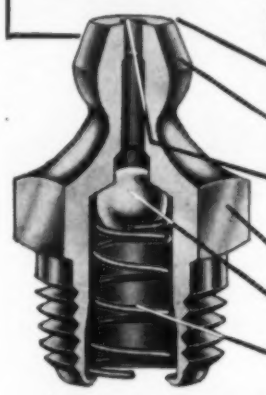
Write for Tong Test Bulletin ND-400

COLUMBIA ELECTRIC MFG. CO.
4525 Hamilton Ave., Cleveland 14, Ohio

For more details circle **NED-380 J3** on enclosed inquiry slip

for positive, leakproof lubrication... "Armor-Hard" ALEMITE FITTINGS

Only Alemite offers so complete a line of hydraulic fittings designed and perfected by Alemite to meet every exacting industrial lubrication requirement—here are the fittings that open the way to faster lubrication and impressive savings in time, money and lubricant.



BETTER 6 WAYS!

1. Sharp dirt-cutting edge bites through dirt and old grease.
2. Exact contour and shape of tip gives a wider sealing angle.
3. Small opening and solid column of lubricant seals against entrance of dirt and grit.
4. "Armor-Hard" body resists scratches, nicks and bending.
5. Hardened steel ball check prevents grease leakage.
6. Best quality music wire spring retained by extra heavy crimp.

Contact your Alemite supplier today!

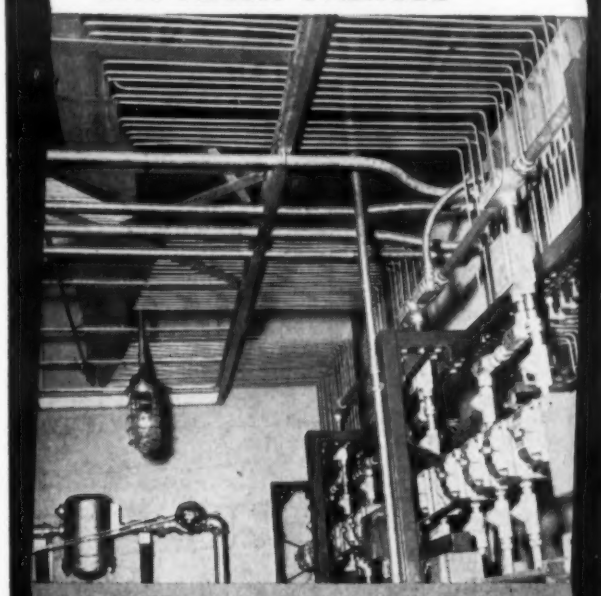
ALEMITE A PRODUCT OF SW STEWART WARNER

1850 Diversey Parkway, Chicago, Illinois

Modern Lubrication Methods That Cut Production Costs

For more details circle **NED-381 J3** on enclosed inquiry slip

Here's how El Dorado Refining Company uses ALCOA UTILITUBE



AIR LINES serving instruments at El Dorado Refinery, El Dorado, Kansas. Exposed to typical refinery vapors, 9,000 feet of corrosion-resistant Alcoa Utilitube* were required for this installation. Air, dried by Alcoa *Activated** Alumina, operates at 110° F and 110 psig.

ALCOA UTILITUBE is the lowest cost corrosion-resistant tube you can buy—up to 40 per cent less than other corrosion-resistant metals!

ALCOA UTILITUBE is versatile. Use it for air for pneumatic and hydraulic control circuits and brake lines—gasoline and fuel oil for internal combustion engines—lubricating oils for engines and machines—fluids for hydraulic systems.

ALCOA UTILITUBE stands up well under vibration and also forms and flares easily.

ALCOA UTILITUBE and fittings are available from your aluminum distributor. Look for his name in your classified phone directory. Write for the new booklet: "Alcoa Utilitube."

ALUMINUM COMPANY OF AMERICA
1002-J Alcoa Building, Pittsburgh 19, Pa.

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Alcoa Aluminum ALCOA

ALUMINUM COMPANY OF AMERICA

For more details circle **NED-382 J3** on enclosed inquiry slip

Step up your internal grinding... boost profits... with this new "TOUCH OF GOLD"

Due to the new Norton G Bond's unique way of holding abrasive grains for maximum cutting action, G Bond wheels cut cooler . . . produce a better finish . . . produce more pieces per dressing . . . hold shape better.

Also, G Bond internal grinding wheels are *precision-processed* for identical structure, bringing you the same top grinding performance every time. Eliminating constant adjustments, they assure faster, lower-cost production, plus the uniform accuracy that means better products. Ask your Norton Distributor for further facts on this value-adding "Touch of Gold." Or write to NORTON COMPANY, Worcester 6, Mass. Distributors in all principal cities — see your telephone directory yellow pages. *Export:* Norton Behr-Manning Overseas Inc., Worcester 6, Mass.

NORTON ABRASIVES
Making better products... to make other products better

W—1508

For more details circle **NED-383 J3** on enclosed inquiry slip

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TO GEAR MANUFACTURERS *Exclusively*

if you produce precision gears of 6" outside diameter or less your files should certainly contain full data on the HAMILTON® Precision Gear Hobber, the machine of exclusive extras.

EXTRA—Hob spindle speeds.

EXTRA—Hob spindle speed ranges.

EXTRA—Accuracy of work and hob spindles (to within .0002").

EXTRA—Rigidity, for maintenance of accuracy.

EXTRA—*Independent* selection of speed, feed, indexing.

EXTRA—Maximum accumulative error of .0002".

EXTRA—Speedy set-up and operation, extra flexibility.

Get the complete story. Write for FREE Bulletin GH-5312.

THE Hamilton TOOL COMPANY
901 HANOVER STREET • HAMILTON, OHIO • U • S • A

For more details circle **NED-384 J3** on enclosed inquiry slip

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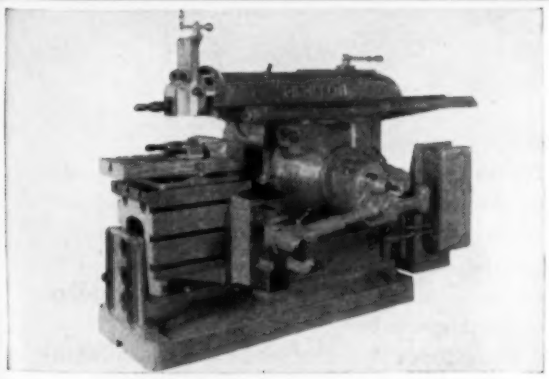

CINCINNATI SHAPERS...

feature automatic pressure lubrication, electro magnetic brake and clutch, multiple cam feeds, horizontal and vertical power traverse.

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THE CINCINNATI SHAPER CO.
CINCINNATI 25, OHIO, U.S.A. SHAPERS • SHEARS • BRAKES

For more details circle **NED-385 J3** on enclosed inquiry slip

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CABLE FAULT LOCATOR
locates faults by impulse method in sheathed, aerial and buried cable

Developed primarily for use on lead covered cable installed in ducts, but adaptable for use on aerial and buried cable, is the impulse cable fault locator. Model 4 transmitter has a maximum output of 15 kv dc and a discharge capacitance of 2 mfd. The 150-lb unit requires a source of supply of about 600 va at 115 v ac and can be used as a source of direct current voltage for proof testing of cable and other insulation.

Maximum proof testing capacity is 15 milliamperes at about 0.7-megohms and about 50 milliamperes at short circuit. Transmitter is available with or without model 2 detector, standard equipment for locating faults by the impulse method. Use can be without the detector, but dependence is entirely on the sound of the discharge at the fault for its location. Made by **James G. Biddle Co.**, Dept. 65-23, 1316 Arch St., Philadelphia 7, Pa.

For more details circle **NED-386 J3** on enclosed inquiry slip

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DRY MIXER
combines stirring, tumbling actions to yield true homogeneous mixture

Stirring and vigorous tumbling movements are combined in this Fisher-Kendall dry mixer which affords the practicality of mixing and storing in the same container. Mixer has two arms mounted to rotate 180 degrees out of phase with each other. Each arm has cast-aluminum jar-holding hand mounted at an acute angle so that when arms revolve, sample is slid and thrown back and forth along jar's length, as well as up and down as jar revolves.

Three-fingered hands are equipped with suction cups and set screws for adjusting to containers ranging from the popular 1-qt size to those of other shapes and lesser capacities. All moving parts are enclosed, and 1/50-hp motor stalls if human hands accidentally enter orbit of action. Mixer can be used for hard-to-dissolve solids and liquid-liquid extractions. It operates on 115-v 60 cycle ac. Made by **Fisher Scientific Co.**, 715 Forbes St., Pittsburgh 19, Pa.

For more details circle **NED-387 J3** on enclosed inquiry slip

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How to train SAFE FORK TRUCK OPERATORS

a complete program in outline form . . . FREE!

WHETHER you operate a fleet or a single truck, you *need* an organized operator training program. This booklet sets it up for you. Covers driver and instructor selection. Provides a full outline of classroom and driving instruction, maintenance and safety procedures. *Write today* for your copy. Lewis-Shepard Products, Inc., 1032-9 Walnut St., Watertown 72, Massachusetts.

MULTIPLY MANPOWER LEWIS-SHEPARD
The "MASTER" Line

For more details circle **NED-388 J3** on enclosed inquiry slip

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Here's why it pays to use LINK-BELT "RC" Flexible Couplings

Equalized load / Proper balance at high speeds / Effective compensation for end float and misalignment

Yes, two big engineering features—single chain simplicity and divided rollers—combine to assure top performance, economical power transmission. And that's why you get the three big operating advantages listed above with Link-Belt RC Flexible Couplings. Find out how you can use these efficient couplings to provide positive flexible shaft connection . . . from fractional to 1000 hp. Ask your nearest Link-Belt office or distributor, or write for Folder 2363.

LINK-BELT
"RC" FLEXIBLE COUPLINGS 13,132

LINK-BELT COMPANY: Plants: Chicago, Indianapolis, Philadelphia, Colmar, Pa., Atlanta, Houston, Minneapolis, San Francisco, Los Angeles, Seattle, Toronto, Springs (South Africa), Sydney (Australia). Sales Offices, Factory Branch Stores and Distributors in Principal Cities.

For more details circle **NED-389 J3** on enclosed inquiry slip

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Use SIZE CONTROL *REVERSIBLE* PLUG GAGES

FOR FAST, ACCURATE GAGING AT LOWEST COST..

. . . our catalog 53 tells you how!

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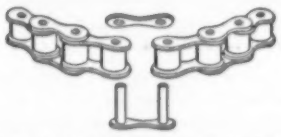
Division of
AMERICAN GAGE and MACHINE COMPANY
SIMPSON ELECTRIC COMPANY SIZE CONTROL COMPANY
WALSH PRESS & DIE COMPANY

For more details circle **NED-300 J3** on enclosed inquiry slip

New ROLLER CHAIN BREAKER

BREAK CHAIN IN SECONDS without damage to chain.



BREAKS ANY SIZE CHAIN No. 25 to No. 60.

BOSTON GEAR QUALITY THROUGHOUT Vital parts heat treated for wear-resistance and high strength.

AT YOUR BOSTON Gear DISTRIBUTOR Ask for new Chain Breaker folder. Explains simple operation.

Boston Gear Works, 69 Hayward St., Quincy 71, Mass.

BOSTON Gear
POWER TRANSMISSION PRODUCTS

▲ For more details circle **NED-391 J3** on enclosed inquiry slip ▲

The lowest costing lift truck you can buy, the Red Arrow features unusual ease of operation, speed and economy. Maintenance cost practically nil. Machined standardized parts and machined bolted frame . . . eliminate downtime. Pays for itself many times a year in time and manpower saved.
Send for Bulletin 252 Today.

LIFT TRUCKS INC., CINCINNATI 14, OHIO

▲ For more details circle **NED-392 J3** on enclosed inquiry slip ▲

TO THE INGENIOUS

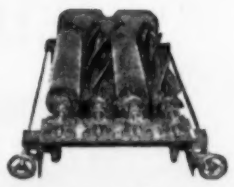
Not familiar with this

NEW INDUSTRIAL TOOL

Free Sample of Fullergript Brush Strip

What problems can you solve by adapting Fullergript to your equipment?

This brush strip can be coiled or twisted into numerous shapes. It can be formed to give intermittent or continuous brushing action. It adapts to stationary or power driven applications. How it may help *you* is a matter of your own ingenuity — plus the services of the Fuller Brush Engineering Dept. Find out what Fullergript can do by sending for a sample strip. We will also send a booklet showing its versatility. Simply write today.



The economy of continuous operation made possible by continuous scrubbing to remove hard baked deposits from steel conveyor in bake oven. Power driven unit applies action through two types of Fullergript brush strip.

INDUSTRIAL Fuller BRUSH CO. DIVISION

3530 MAIN STREET • HARTFORD 2, CONN.

Power driven brushes, Factory & Institutional cleaning tools, Waxes & Detergents

▲ For more details circle **NED-393 J3** on enclosed inquiry slip ▲

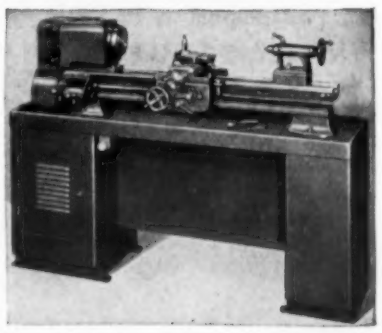
OFFICE FURNITURE
with durable laminated plastic tops

Line of Mode-Maker metal modern desks, office tables and telephone stands is offered with surfaces of General Electric Textolite, a laminated plastic which

withstands cigarette burns and severe abuse without cracking. Plastic is bonded to the furniture with an adhesive produced by Armstrong Cork Co. Gray-green satin finish of surface minimizes glare and light reflectance and permits spilled ink and pencil marks to be wiped off, besides providing a good surface for writing. Made by **General Fireproofing Co.,** Dept. NE, Dennick Ave., Youngstown 1, O.

▲ For more details circle **NED-394 J3** on enclosed inquiry slip ▲

12-IN. LATHE
has ball bearing mounted spindle



Capable of "hogging" out heavy cuts, high speed production runs and holding tool room tolerances, this 12-in. lathe features heavy headstock, ball bearing mounted spindle and double V-belt drive. Swing over bed and saddle wings is 12 in., collet capacity is 1 in., spindle hole is 1⅜ in. and center distances are 23 and 35 in. Sixteen speeds from 38 to 1260 rpm are available. Also featured are lever-operated disk type clutch, long and wide cross slide bearing surfaces and apron operating in an oil bath. Made by **Logan Engineering Co.,** 4904 W. Lawrence Ave., Chicago 30, Ill.

▲ For more details circle **NED-395 J3** on enclosed inquiry slip ▲

Constructional Steel Framing

American Steel & Iron Works—4-page bulletin MC-535 describes and illustrates StoRack all-purpose steel framing for all kinds of mechanical and electrical equipment, also for storage racks, tables, benches and similar items. Steel channel, brackets, serrated nuts and bolts are the four basic components of the system. Drilling, welding and riveting are not necessary, and most structures require only a simple assembly operation.

▲ For more details circle **NED-396 J3** on enclosed inquiry slip ▲

TYGON plastic PAINT

STOPS ACID AND ALKALI ATTACK

Maintenance Men! You can stop corrosion before it starts — protect your plant and equipment from chemical attack — with TYGON plastic PAINT — the positive protective coating. Properly applied, TYGON offers the maximum possible in resistance to both acids and alkalies — and, to oils, greases, water and many solvents as well.

TYGON requires no more than normally good surface preparation — can be applied by brushing or spraying. TYGON dries fast — forms a tough, flexible film that's easy to clean and long-lasting. TYGON is available in wide range of colors — in quart, gallon, 5 gallon, and 55 gallon containers.

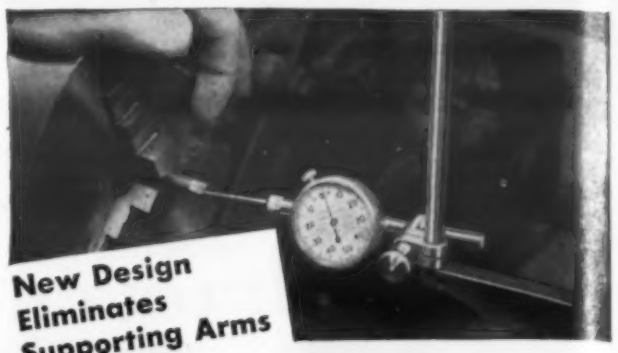
Try TYGON — buy TYGON, today, or write for full details and samples.

Plastics and Synthetics Division

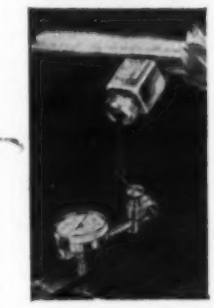
U. S. STONEWARE
AKRON 9, OHIO

307C

▲ For more details circle **NED-397 J3** on enclosed inquiry slip ▲



New Design Eliminates Supporting Arms



LUFKIN

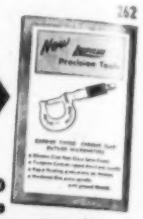
UNIVERSAL DIAL TEST INDICATOR
Shortens Working Time

Modern simplified design gives faster readings, guarantees long accurate service. Extra long hole attachment screws directly into base — *requires no supporting arms.* One piece base and shank, jewelled thrust bearing, smooth, sensitive mechanism that requires no oiling, adjustable bezel and the easy-to-read dial make the Lufkin Universal Dial Test Indicator lighter, more accurate, more durable. Packed in fitted wood cases complete with all attachments.

262

Many New LUFKIN Precision Tools make your work easier and better

SEND FOR *Free* ILLUSTRATED New Tools Booklet



BUY LUFKIN TAPES • RULES • PRECISION TOOLS **From Your Distributor**

THE LUFKIN RULE CO., Saginaw, Michigan, Dept. NED 132-138 Lafayette, New York City — Barrie, Ontario

▲ For more details circle **NED-398 J3** on enclosed inquiry slip ▲

HOW TO SELECT THE *RIGHT* MOTOR AND CONTROL FOR YOUR JOB

Name your motor and control need . . . a-c or d-c, from 1 to 700 hp . . . this book has the answers! Gives requirements to consider before selection. Features comprehensive chart, teaming the right motor and control to the right job.

Introduces Westinghouse motor and control features—tells what they mean to you . . . shows modifications and accessories available and explains how they add life and versatility. It's a valuable selection guide with a storehouse of facts. Write for free booklet, Motor and Control Selector Guide, B-5458, Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania.

J-21687

YOU CAN BE SURE... IF IT'S **Westinghouse**
MOTORS and CONTROLS

▲ For more details circle **NED-399 J3** on enclosed inquiry slip ▲

Lithographers National Association Awards
MEYERCORD DECALS FIRST PLACE AGAIN IN 1953!

Produced for Storkline Furniture Corp. —Fawn and Bear crib decoration in third dimensional technique.

1st 1953

For the second straight year the decal industry has been invited to compete in the Lithographers National Association Awards . . . and for the second straight year we proudly acknowledge the winning of FIRST PLACE in this competition by The Meyercord Co.

It is important to you to know that The Meyercord Co. has been honored by expert judges recruited from top levels of the graphic arts. When you bring your decal transfer problem to Meyercord you are *sure* you will receive the counsel of carefully trained and experienced people . . . backed by the finest and most complete laboratory and production facilities available. Count on Meyercord for the *right* decal for *every* commercial surface and finish.

Your inquiry is invited . . .

Produced for Eli Lilly and Co.—oil paint reproduction of Florence Nightingale distributed in observance of hospital week.

1st 1952

THE MEYERCORD CO.
World's Largest Decalcomania Manufacturers
DEPT. J-316
5323 WEST LAKE ST.
CHICAGO 44, ILLINOIS

For more details circle NED-400 J3 on enclosed inquiry slip

Another FLASH-O-LENS at work
...checking pigment dispersion at
B. F. Goodrich

The inspection tool that *lights* and *magnifies*—FLASH-O-LENS—is in daily use at The B. F. Goodrich Company in making laboratory checks on the dispersion of pigments in milled rubber stocks.

The built-in bulb of a FLASH-O-LENS brightly illuminates the inspection area—the accurately ground lenses give sharp, detailed enlargement. Result: quick, simple inspection!

Battery and plug-in models from $10.65. Write for free literature on applications, types, prices.

E. W. PIKE & COMPANY
492 NORTH AVENUE ELIZABETH 3, N. J.

For more details circle NED-401 J3 on enclosed inquiry slip

SHIPPING COSTS GO DOWN
CORROSION LOSSES STOP
WITH MARVELLUM VPI® WRAP

• Time consuming slushing, expensive wraps and seals, messy and costly cleaning are no longer necessary if you use Marvellum VPI. Developed for Government shipments during the war, VPI is now available to all. It's the ideal wrap for shipping Ferrous metal parts. A special coating on the paper vaporizes and forms an invisible protective film around the item wrapped, preventing corrosion.

It is easy to use — just fold the paper over the part. Tight seals, rust-preventive oils, puncture-proof wrappings or direct contact with the chemical are not necessary. Yet Marvellum VPI protects against rust for years. Open the wrapping and there's the part as bright and clean as when it was made.

Marvellum VPI is available in sheets, envelopes or special containers. Marvellum has complete facilities under one roof for designing, coating and producing VPI Wraps. Also makers of a wide range of other Barrier Materials, Government Approved, for product protection.

Write for FREE Booklet and name of nearest distributor.

The Marvellum Company
30 APPLETON STREET HOLYOKE, MASS.
First and Foremost in VPI Protection

For more details circle NED-402 J3 on enclosed inquiry slip

PANEL SAW
carriage pull rod added to rails

Addition of a pull rod to the Mitermaster Long Rail panel saw makes it possible for operator to draw carriage across stock without changing position. Carriage is drawn through stock for distance of 2 ft at which point a quarter-turn of handle disengages rod from carriage, and rod is returned for another 2-ft stroke. Stops limiting stroke can be removed to effect uninterrupted pass if desired. Provision is made for use of lead screw when slow positive feed is required. Saw is offered in 6, 8 and 10-ft rail models having 4½, 6½ and 8½ ft capacities, respectively. Operator is shown cutting corrugated plastic awning at 45-degree bevel. Made by **Hendrick Mfg. Corp.**, Dept. NE, 11 Selman St., Marblehead, Mass.

For more details circle NED-403 J3 on enclosed inquiry slip

WELDING POSITIONER
table and tilt driven by gear train

Both table and Acme-powered tilt of model P3000 heavy parts welding positioner are driven by enclosed gear train. Latter has self-locking gears and can be swung through 120 degrees from horizontal. Limit switches are built in. Constant torque table speed is variable from 0 to 1½ rpm, and dynamic braking eliminates coasting or over-running when current is off. Table may be rotated through 360 degrees, regardless of tilt position and its direction can be instantly reversed. Built-in collector disks (1000 amps) in table face assure grounding and minimize bearing and gear failure caused by stray electrical currents. Power requirements are 220/440 v, three-phase at 10/5 amp. Made by **Leader Welding & Mfg. Co.**, Dept. D, 2418 Sixth St., Berkeley 2, Calif.

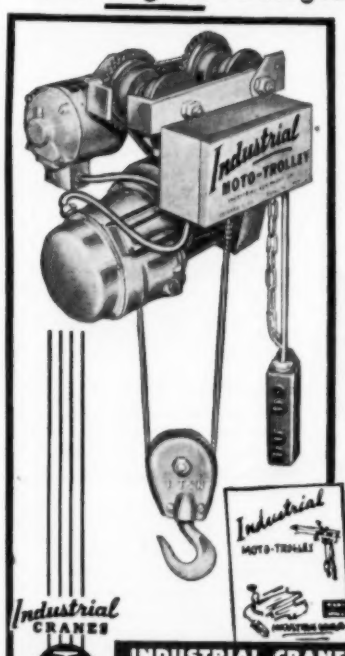
For more details circle NED-404 J3 on enclosed inquiry slip

Gear Pumps

Schutte & Koerting Co.—Cut-away drawings, colored sectional diagrams and installation photos are used in 24-page bulletin No. 17-A to describe characteristics and features of line of gear pumps. They can handle material with viscosity ranges from 30 to 10 million SSU, or pump from 1 gph to 1000 gpm, or pump against back pressure up to 3500 psi. Capacities and other data are included.

For more details circle NED-405 J3 on enclosed inquiry slip

Industrial MOTO-TROLLEY
The Original Packaged Motor Driven Trolley



MAY BE ATTACHED TO YOUR STANDARD ELECTRIC HOIST . . .

Adjustable to Accommodate Wide Variety of Beam Sizes

• Crown-tread machine steel wheels with hardened drivers.
• Each wheel equipped with double-row precision ball bearings and removable-head axle with Alemite grease fittings.
• Powered by a crane-duty high-torque totally enclosed motor of 30 minute 55 degree rating.
• Magnetic contact panel has transformer to reduce voltage in single speed push button control circuit.
• 4-button control station operates single speed trolley and hoist motions.

Write for Literature

Industrial CRANES

INDUSTRIAL CRANE & HOIST CORPORATION
(formerly Industrial Equipment Co.)
327 NORTH ADA STREET CHICAGO 7, ILLINOIS
Overhead Cranes • Jib Cranes • Monorail Systems
Crane Runways
Representatives in Principal Cities

For more details circle NED-406 J3 on enclosed inquiry slip

PRODUCTION BORING with E-Z SET by Maxwell

Only the MAXWELL E-Z Set boring tools feature high speed operation, micrometer-like adjustment to 0.0001-inch and maximum boring range.

Interchangeable shanks permit E-Z Set boring tools to be used in turret lathe, jig-bore, milling machine, boring mill, automatic or other machine tools. Because they can be adjusted for cut in only one-tenth the time formerly required by similar tools, these Maxwell-made tools can meet high-speed production on schedules.

E-Z Set boring tools are available in three models having maximum boring bar capacities of ½, 1 and 1½ inches and covering a boring range of from ⅜ to 20 inches.

Write today for catalog.

THE MAXWELL COMPANY
390 Broadway • Bedford, Ohio

For more details circle NED-407 J3 on enclosed inquiry slip

You Just Can't File Away These Problems . . .

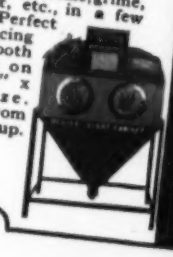
BLAST CLEANING

. . . of bridges, buildings, tanks, structural work

Pangborn Blast Cleaning Machine—Cleans tanks, bridges, structures quickly and economically. Ideal for maintenance and other jobs, such as removal of dirt, rust, etc. Six sizes, stationary or portable, $188 and up.

. . . of small castings, forgings, stampings, heat treated parts.

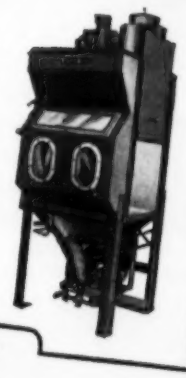
Pangborn Blast Cabinet—Saves time and money in cleaning small metal parts, removing rust, scale, grime, old paint, etc., in a few seconds. Perfect for producing clean, smooth surfaces on pieces 60" x 35" in size. Models from $319 and up.



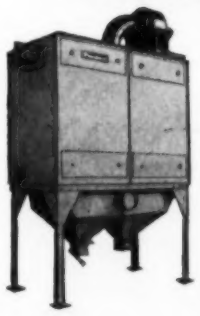
PRECISION FINISHING

. . . of molds, dies, tools

Pangborn Hydro-Finish Cabinet—Removes scale and directional grinding lines . . . holds tolerances to .0001" and prepares surfaces for painting or plating. Liquid blast reduces costly hand cleaning and finishing of molds, dies, tools, etc. Models from ..... $1410 and up.



CONTROLLING DUST



. . . at the source of origin

Pangborn Unit Dust Collector—Traps dust at the source. Reduces maintenance costs . . . keeps plant clean and improves community relations. Allows reclamation of valuable material. Models from ..... $286 and up.

BUT YOU CAN MAIL THIS COUPON TO PANGBORN FOR HELP IN SOLVING THEM!

Pangborn

Look to Pangborn for the latest developments in Blast Cleaning and Dust Control equipment

☐ Blast Cleaning Cabinets
☐ Blast Cleaning Machines
☐ Unit Dust Collectors
☐ Hydro-Finish Cabinets

PANGBORN CORP., 2400 Pangborn Blvd., Hagerstown, Md.
Gentlemen: Please send me more information on the equipment I've checked. To be used for.....
.....
Name .....
Company .....
Address .....
City .....Zone....State.....

For more details circle NED-408 J3 on enclosed inquiry slip

Now Better * than ever

FLEX-A-FOAM FILTER MASKS

For Safe, Economical Dust Protection

NEWLY designed for better-than-ever comfort and efficiency. It's easier to breathe through and talk through than an ordinary pocket handkerchief — yet filters nuisance dust particles as small as 1/25000 of an inch!

- **Economical** — Only Flex-a-Foam has long-lasting washable filter that outlasts throw-away type by more than 100 to 1. Filter savings alone more than pay total cost of mask.
- **Comfortable** — Self-adjusting to every face size. Can be worn with goggles or spectacles.
- **Simple** — Only four sturdy, long-lasting parts — all interlocking — all unconditionally guaranteed.

* *New frame design positively locks out air leaks, permits speedy removal of filter for cleaning.*

Dust Protection your workers will welcome and *Wear*

FLEX-A-FOAM® FILTER MASK

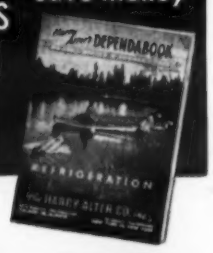
SAMPLE STILL ONLY $1.40 POSTPAID

THE GOGGLE PARTS COMPANY • CLEVELAND 13, OHIO

▲ For more details circle NED-409 J3 on enclosed inquiry slip ▲

WE'LL SEND YOU THIS WHOLESALE CATALOG FREE!

Save Money



OVER 9,000 ITEMS INCLUDING

THE HARRY ALTER CO.
1726 S. MICHIGAN AVE., CHICAGO 16
132 LAFAYETTE ST., NEW YORK 13

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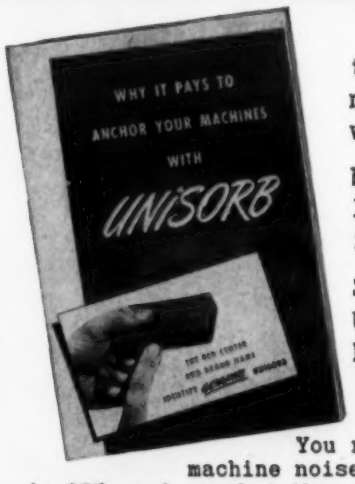


to mount your machines without...

bolts
lag screws
floor damage

Send for the UNISORB® Booklet

You reduce transmitted machine noise and vibration up to 85%, and you lengthen machine life, when you use UNISORB mounting pads. And there is no danger of the machines "walking" when mounted this easy way. Send for your copy of the booklet describing this modern way to mount machines.

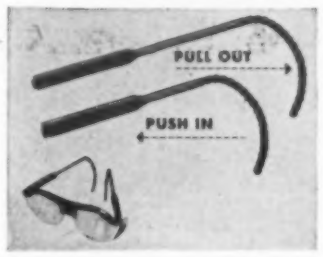
RETURN COUPON TODAY!

the **FELTERS** company, 224 South St. Boston, Mass.
Please send me a copy of "Why It Pays to Mount Your Machines on UNISORB" — at no obligation to me.

Name.....Title.....
(Please Print)
Company.....
Address.....
City.....Zone....State.....

▲ For more details circle NED-411 J3 on enclosed inquiry slip ▲

ADJUSTABLE TEMPLES add comfort to safety glasses



By telescoping in and out for perfect fit, plastic Retrax temples for three models of Eye-Saver safety glasses provide a high degree of comfort for the wearer. "Ball chain" design of the hook fits comfortably into the cartilage contour behind the worker's ear to prevent falling off while in use. Plastic hook can also be adjusted to fit every ear shape. Plastic temples are available on Tuc-Away model 415, Methaspec model 55 and Split-Joint spectacle frame model 80. Made by **Watchemoket Optical Co.**, Dept. N31, 232 W. Exchange St., Providence 3, R. I.

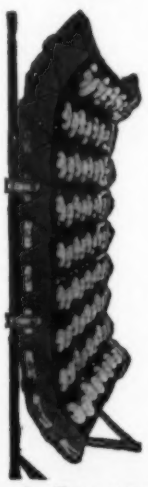
▲ For more details circle NED-412 J3 on enclosed inquiry slip ▲

CHAIN SAW has 5-hp gasoline engine

Equipped with a 5-hp gasoline engine, model 5 chain saw is designed for ease of use in any position and is well balanced. It is available in various sizes from 20 to 40 in., and also in a 22-in. bow model. Features include chrome-plated finish for rust protection, magneto ignition, automatic clutch and rewind starter, automatic chain oiler and positive tensioning control. Unit is lightweight and compact. Made by **Lombard Governor Corp.**, 150 Main St., Ashland, Mass.

▲ For more details circle NED-413 J3 on enclosed inquiry slip ▲

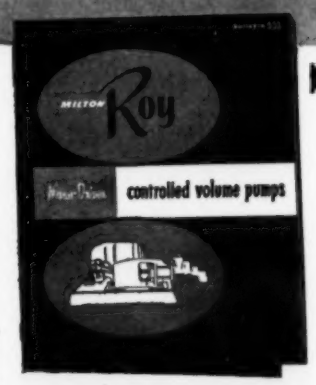
LARGE INFRARED OVEN units can be assembled as desired



For large side heating applications, the units making up this infrared oven are available in standard 32 and 48-in. lengths. Joint design makes possible the individual adjustment of sections from the outside. Lamp rows are of asbestos insulated metal backed construction to keep heat inside the oven. Oven is equally well suited for both conveyorized and nonconveyorized work, and is equipped with R-40 reflector lamps. An occasional wiping of the face of these lamps is the only maintenance required to keep oven at peak working efficiency. Made by **Wil-Son Mfg. Co.**, Dept. NE, Cloverport, Ky.

▲ For more details circle NED-414 J3 on enclosed inquiry slip ▲

A NEW MILTON ROY BULLETIN ON MOTOR-DRIVEN CONTROLLED VOLUME PUMPS



BULLETIN NO. 553

This is a *valuable reference book* for your library on pumping in controlled volume. Send for your *free copy.*

• • •

Here's an informative, helpful Bulletin which tells you what *Milton Roy Motor-Driven Controlled Volume Pumps are—what they do—how they do it!*

- The Bulletin is profusely illustrated, with photographs, diagrams, helpful applications, selection charts and data.
- Chemicals handled with these versatile pumps, together with crisp color charts showing relative corrosion resistance of various metals, are given.
- Pump capacity regulation by various plunger speed and stroke adjustments are described. Application to modern instrumentation processes is explained.

MILTON ROY COMPANY
1304 E. MERMAID LANE • PHILADELPHIA 18, PA.

▲ For more details circle NED-415 J3 on enclosed inquiry slip ▲

TOUGH GUY...

With Accurate Control

Masoneilan Air Reducing Valve

This accurate reducing valve is built to take it. Compact. Easy to service. Has large capacity . . . instant response. Its sturdy dependability and simple construction reduces maintenance to a minimum.

Initial pressure up to 250 lbs. reduced to any pressure from 5 - 60 lbs., 60 - 100 lbs. Sizes ¼" to ½". Pressure gauge included.

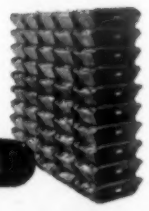
Call your local Mason-Neilan Industrial Distributor for fast, dependable service.

MASON-NEILAN
REGULATOR CO.
1189 ADAMS ST., BOSTON 24, MASS., U. S. A.

▲ For more details circle NED-416 J3 on enclosed inquiry slip ▲

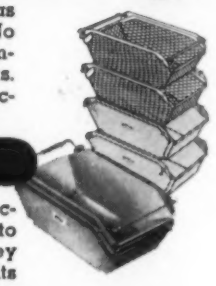
STANDARD BOXES *for* SPECIAL JOBS!

- For any problem you have in handling small parts, there is a standard NesTier custom-made to fit your requirements. A production line product, the NesTier effects savings in initial cost and on the job—from stock room to loading dock.



STOCK ROOM OR STORAGE

The only box that will serve alone as a permanent stock room fixture. No racks needed as tiered units lock themselves together to form rigid stacks. Parts in all units are visible and accessible.

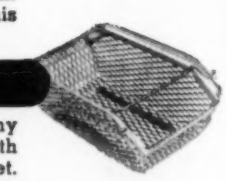


PRODUCTION

NesTiers were designed for production line work. Empty, they nest to save space. Filled and tiered, they lock together with contents of all units visible and accessible. They are easily transported by truck, roller or overhead conveyor or by hand.

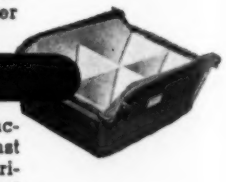
DRAINAGE

Here is the standard steel NesTier with a lanced bottom that permits rapid drainage of contents without allowing small parts to slip through. No need to transfer parts when this box is used.



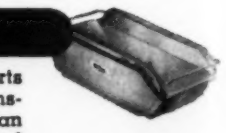
DEGREASING

No need to change boxes for any dipping or degreasing operation with this NesTier expanded metal basket. Formed in the distinctive NesTier shape, this unit is as rugged as the sheet steel box and retains all NesTier features.



PROTECTION

NesTier fibre inserts perform two functions. Parts are protected against damage from metal box and a variety of parts may be carried without becoming mixed. Furnished with or without dividers.



SHIPPING

The NesTier "snap on" lid keeps parts from jouncing out while being transported. Units with lids attached can be tiered allowing parts to be stored or transported and yet keep clean.

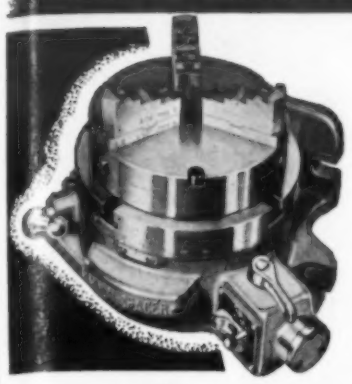
NesTiers are formed of one-piece sheet steel, with or without lanced bottom; zinc plated expanded metal; galvanized; stainless steel or aluminum. All units and accessories interchangeable. Two standard sizes.

NESTIER
IT NESTS - IT TIERS

THE CHAS. WM. DOEPKE MFG. CO., Inc.
METAL SPECIALTIES DIVISION • ROSSMOYNE, OHIO

▲ For more details circle NED-417 J3 on enclosed inquiry slip ▲

New Indexing Fixture with Built-in Selector



THE NEW GORTON Multi-Spacer

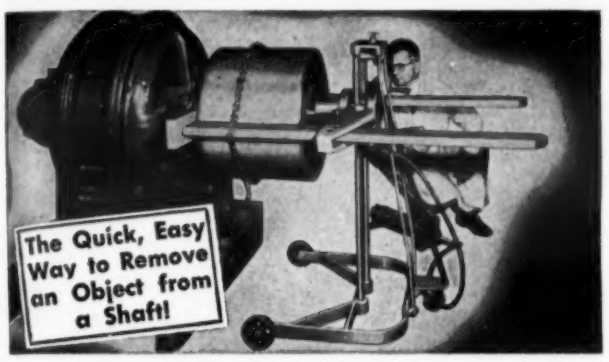
A time-saver for all types of milling, drilling, boring and grinding operations. Eliminates extra job set-ups. Features built-in automatic selector; permanent index discs; no loose parts — no discs to change; 9" dia. table; sealed mechanism; vertical or horizontal set-up; milled base for ½", ⅝" or 11/16" keys. Available with seven positions . . . 2, 3, 4, 6, 8, 12 and 24 divisions.

FREE BULLETIN!

For detailed information on the Multi-Spacer and numerous other Gorton Time-saving Machine Tool Accessories write today for Free Bulletin No. 1317.

GEORGE GORTON MACHINE CO.
1909 RACINE ST., RACINE, WISCONSIN

For more details circle NED-418 J3 on enclosed inquiry slip



The Improved Hydraulic

PULLEY PULLER

For Removing Pulleys Wheels, Gears, Couplings Sheaves, etc.

One man can do it in minutes—even if objects are stuck fast. No crowbars, sledges or blowtorches. No damage to equipment. Puller is adjustable—easy to move—rugged. Hundreds being used in industry.

- 5-ton size on wheels $92.50
- 20-ton size on wheels $290.00
- 50-ton size as shown $655.00

(F.O.B. Factory)

Write for complete information — Catalog E

INDUSTRIAL ENGINEERING EQUIPMENT CO.
122-124 E. 4th St. Davenport, Iowa

For more details circle NED-419 J3 on enclosed inquiry slip

standardize on standard

HALLOWELL CABINET BENCHES

Finest all-steel construction, smooth, rigid working surfaces, free-sliding, carefully fitted doors, and roller bearing drawers make them outstanding. Functional design blends with any industrial interior. Standard accessories permit you to custom build them to your requirements. Stocked and sold by industrial distributors. Write for literature. SPS, Jenkintown 24, Pa.

Our Fiftieth Year : A START FOR THE FUTURE

HALLOWELL SHOP EQUIPMENT DIVISION SPS JENKINTOWN PENNSYLVANIA

For more details circle NED-420 J3 on enclosed inquiry slip

CORROSIVE CHEMICAL PUMPS
self-priming types range from 1/3 to 20 gpm at 0 to 60 psi

Buna N hard rubber body block utilized in PXHR series pumps withstands temperatures up to 225° F as well as corrosive effect of many acids, caustics and organic solvents. Design eliminates need for stuffing boxes, shaft seals, check valves or gaskets. Pump is activated by eccentric rotor and shaft assembly which rides inside molded Flex-i-liner.

Fluid, passing on outer surface of liner and inner surface of body block, is progressively squeezed through the pump. Molded flanges on liner straddle body block and are pressed to its side by end plates sealing off fluid passage from contact with moving parts. Capacities range from 1/3 to 20 gpm with pressures from 0 to 60 psi. All units are self-priming with suction lifts up to 24 in. of mercury. Made by **Vanton Pump Corp.**, Dept. NED, Empire State Bldg., New York 1, N. Y.

For more details circle NED-421 J3 on enclosed inquiry slip

AUTOMATIC OSCILLOGRAPH
records power system disturbances

For photographically recording power system disturbances, preselected magnitudes, wave shapes and phase relations, PM-13 oscillograph has seven galvanometers with separate shunt and resistor unit for adapting them to current or voltage measurements. Relays and controls are provided for starting the instrument automatically by overcurrent in ¼-cycle, and stopping it after a predetermined interval or after fault has been cleared. Units provide information on circuit-breaker, relay and system performance and on fault location. Including a time recorder which photographically establishes date and time of each oscillogram, unit measures 16 in. wide, 23-7/16 high and 10¾ in. deep. Made by **General Electric Co.**, Schenectady 5. N. Y.

For more details circle NED-422 J3 on enclosed inquiry slip

All-Electric ADJUSTABLE SPEED

with the 3/4 to 3 hp. RELIANCE V★S DRIVE Jr. STYLE E

Saves You Money 10 Ways!

- Boosts output
- Reduces operator fatigue
- Cuts changeover time
- Simplifies machine design
- Handles more jobs
- Cuts down rejects
- Reduces "down time"
- Increases safety
- Saves space
- Operates from a-c.

WRITE FOR BULLETIN D-2102

RELIANCE ELECTRIC AND ENGINEERING CO.
1082 IVANHOE ROAD • CLEVELAND 10, OHIO

Sales Offices in Principal Cities

For more details circle NED-423 J3 on enclosed inquiry slip

Blackhawk BENDERS

are just plain handier and really portable

WITH Blackhawk's "Porto-Power" Bender you can pump from *any spot.* Hydraulic pump is *separated* from bender by a flexible safety hose. Bender works in any position — on its side or upright . . . on table or floor . . . on existing runs. A man can move around, "jockey" the pipe with one hand — sight along it if necessary . . . without stopping the pumping.

There's a Blackhawk Bender for every popular size of conduit — rigid or thin-wall. Remember, too, "Porto-Power" hydraulic jacks lift machinery, pull pulleys, lick dozens of jobs. Compare *all* pipe benders and *you'll buy Blackhawk.* See your Electrical Wholesaler or Industrial Supply Distributor, Blackhawk Mfg. Co., Dept. P-1493 Milwaukee 1, Wisconsin.

Write for Blackhawk's free catalog 508 for electricians.

For more details circle NED-424 J3 on enclosed inquiry slip

Added Evidence that

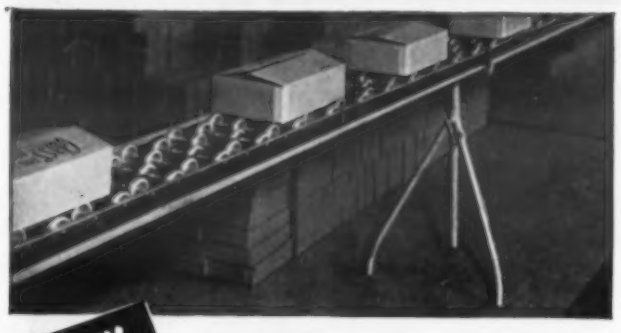
Everyone Can Count on

VEEDER-ROOT

REPORTER AT LARGE . . . that's what you might call this new Veeder-Root Reset Magnetic Counter . . . adaptable to remote counting from machines or processes to central boards or instrument-clusters, wherever you want to put them. NOW . . . what can your imagination do with these few facts? For the *full facts*, write:

VEEDER-ROOT INCORPORATED
HARTFORD 2, CONN.

For more details circle NED-425 J3 on enclosed inquiry slip



NEW

FARQUHAR Roll-Free GRAVITY CONVEYORS

for faster materials-handling!

SPEED your production and cut materials-handling costs with trouble-free, economical Farquhar ROLL-FREE gravity conveyors. ROLL-FREE conveyors are scientifically designed, not only to move boxes, crates and cartons smoothly and easily, but to perform year after year with a minimum of maintenance. This is no idle claim—our engineers will be glad to show you why, at no obligation. Write to the address shown below, telling us what you want to move.

OLIVER Farquhar CONVEYORS

FREE! "Owners Report"—a booklet of case histories describing money-saving Farquhar conveyor installations. Write. The OLIVER Corporation A. B. Farquhar Division Conveyor Dept S-04 York, Penna.

POWER-BELT & GRAVITY CONVEYORS

For more details circle NED-426 J3 on enclosed inquiry slip

Now

ACE SHIELDED ENCLOSURES

are available for specification

MIL S-4957

featuring

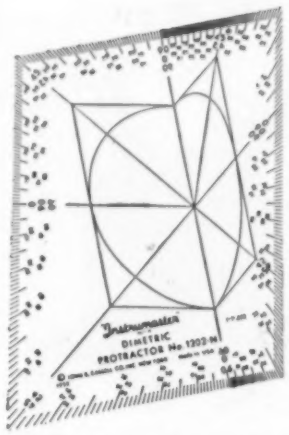
- **Interchangeability**—Complete assembly uses only 2 panel sizes, each interchangeable with any other of the same size.
- **Simple Assembly**—Erection is easier, faster, than any previous design.
- **Attenuation**—R-F suppression beyond that required by the specification.
- **Bulletin No. 5** gives complete details. Write, wire, or telephone for your copy.

ACE ENGINEERING and MACHINE CO., Inc.
3644 N. Lawrence St., Philadelphia 40, Pa.
Telephone: REgent 9-1019

PIONEERS IN SHIELDED ENCLOSURE DEVELOPMENT

For more details circle NED-427 J3 on enclosed inquiry slip

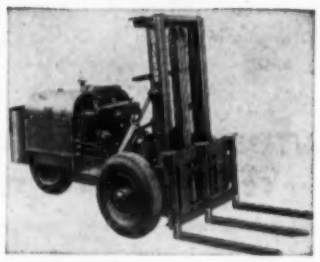
DIMETRIC PROTRACTOR
measures axonometric plane angles



Measurement of angles in the axonometric planes of dimetric drawings based on scale ratio of 1:1:0.632 is possible with this dimetric protractor made of vinyl plastic. Use can be in conjunction with conforming dimetric equipment, such as ellipse stencil and graph sheet. Protractor contains dimetric graduations both for the 1:1 plane and two 1:0.632 planes. Each graduation covers a 180-degree total. Second set of numbers is printed in reverse to facilitate reading if instrument is used in reversed position. Price is $1.50. Made by **John R. Cassell Co.**, 112 W. 42nd St., New York 36, N. Y.

For more details circle NED-428 J3 on enclosed inquiry slip

POWER LIFT TRUCKS
compact indoor-outdoor units



Designed with 4000 and 6000-lb capacities, model F-4R and F-6R power lift trucks can be used both indoors and outdoors where small, compact units are required. Features include large pneumatic tires, good operator vision and 12-in. center underclearance. Ballast box at back of truck over rear steering wheel permits varying balance weight. Trucks are equipped with International U2A engines, 11-in. heavy duty clutch and transmission with four speeds forward and four speeds reverse. Maximum speed is 25 mph. Forks, fork sideshifter, hydraulic scoop and other attachments are available. Standard lift is 108 in. and lowered height is 80 in. Made by **Erickson Power Lift Trucks, Inc.**, 1421 Marshall St. N. E., Minneapolis 13, Minn.

For more details circle NED-429 J3 on enclosed inquiry slip

Controlled Volume Pumps

Milton Roy Co.—4-page illustrated bulletin 553 fully describes line of motor driven volume controlled pumps for application in chemical, petroleum, water and waste treatment, pulp and paper, textile and metal-working industries. Technical data includes design and construction, capacity-pressure selection tables, types of capacity adjustments, standard and special designs and packaged systems. Four-page four-color materials selection chart shows materials of which pump should be constructed for dealing with specific chemicals.

For more details circle NED-430 J3 on enclosed inquiry slip

Produce MORE STEAM... in LESS SPACE... at LOWER COST!

WITH

CYCLOTHERM* CYCLONIC COMBUSTION

- In thousands of installations, Cyclotherm Steam Generators set new standards for performance and economy. Exclusive Cyclotherm flame control produces 66% more power per sq. ft. of heating surface than competitive type boilers and requires only 3 sq. ft. of heating surface per Boiler Horsepower . . . saving up to ⅓ on installation space.

Guaranteed 80% efficiency
Complete on arrival. Only 4 easy connections
Fully automatic controls
Full power operation in 15 minutes

Cyclotherm Steam Generators are designed for 18 to 500 h.p., 15 to 200 psi operating pressures. Approved—ASME, Nat'l. Board Standards, Underwriters Laboratories, Inc.

*Reg. trade name

Write for free catalog today Dept. 40

CYCLOTHERM* STEAM GENERATORS
CYCLOTHERM DIVISION UNITED STATES RADIATOR CORP.-OSWEGO, NEW YORK

For more details circle NED-431 J3 on enclosed inquiry slip

making "cobra coils" out of stainless tubing?

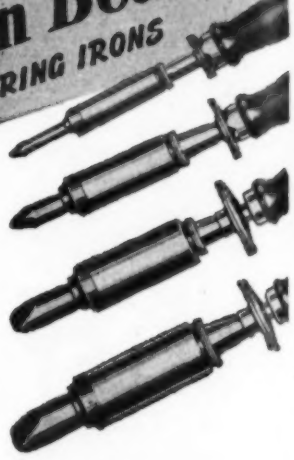
Probably your fabricating problem is not so complex—but whatever it is—here's the "charm" to make it easy. It's the new Carpenter Bending and Coiling slide chart for Stainless Tubing and Pipe. Send for it today.

THE CARPENTER STEEL COMPANY
Alloy Tube Division, Union, N. J.

For more details circle NED-432 J3 on enclosed inquiry slip

EXPERIENCE SINCE 1894

Built into **American Beauty** ELECTRIC SOLDERING IRONS



FOR MORE YEARS OF EFFICIENCY

Since 1894 these electric soldering irons have demonstrated their efficiency and durability . . . Manufacturing plants, service, maintenance and repair shops choose them for their durability and efficiency.

TEMPERATURE REGULATING STAND

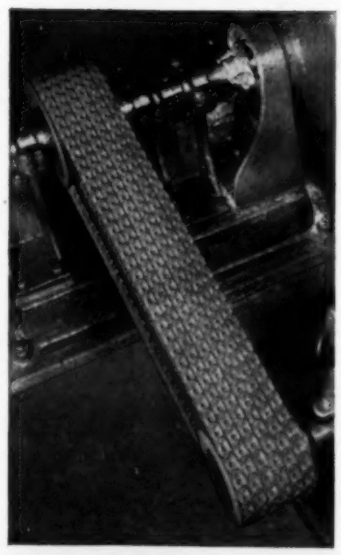
A thermostatically controlled device for maintaining an electric soldering iron at any desired heat while at rest. Adjustable from low or warm to full working temperature.

NO. 117-2 Write for Literature

AMERICAN ELECTRICAL HEATER COMPANY
DETROIT 2, MICHIGAN

For more details circle NED-433 J3 on enclosed inquiry slip

Test these 3 "E's" of Veelos in your plant



Ease of Installation—the link construction of Veelos makes it easy to install without re-setting the motor or tearing down outboard bearings. Installation time is often cut 50% to 90% over endless v-belts.

Efficiency of Operation—because individual Veelos v-belts can be adjusted for correct tension, matched sets can be kept matched; vibrationless, full power delivery is assured.

Economy of Inventory—just 4 reels of Veelos in the 0, A, B and C widths can replace up to 316 different sizes of endless v-belts. Inventory is simplified, costly belt deterioration is eliminated and you save valuable stockroom storage space.

VEELOS DATA BOOK

Here's the complete story on Veelos, the adjustable v-belt. Write for your copy today!

VEELOS THE LINK V-BELT

MANNHEIM MANUFACTURING AND BELTING CO.
650 Manbel Street, Manheim, Pa.

Adjustable to Any Length • Adaptable to Any Drive

For more details circle NED-434 J3 on enclosed inquiry slip

Sturdily Built for
RUGGED USE

MODEL "H" STROKE COUNTER in attractive new finish — Seal Brown and Alaska Gray

This Productimeter Heavy Duty line is designed for hard usage and long service. Especially adaptable to production machines such as punch and drill presses, screw machines, turret lathes, etc.

There is a Productimeter for every counting job . . . always accurate . . . always dependable. They eliminate all "guess-work" . . . insure profitable operations and more efficient use of man-hours in your plant.

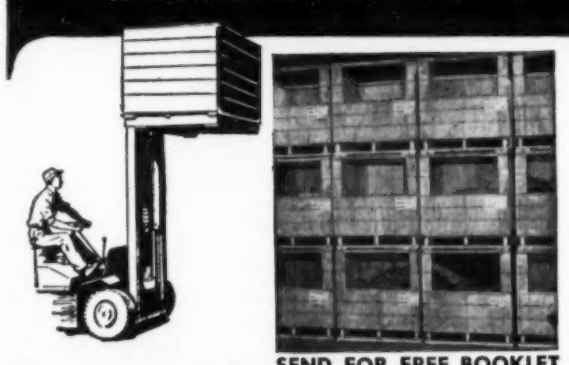
Send for Catalog No. 101

DURANT MANUFACTURING COMPANY
1922 N. Buffum Street, Milwaukee 1, Wisconsin
122 Orange Street, Providence 3, R.I.
Representatives in Principal Cities

PRODUCTIMETERS SINCE 1879 Count Everything

For more details circle NED-435 J3 on enclosed inquiry slip

Generalift
PALLET BOXES
1. CUT MATERIALS HANDLING COSTS
2. REDUCE STORAGE COSTS

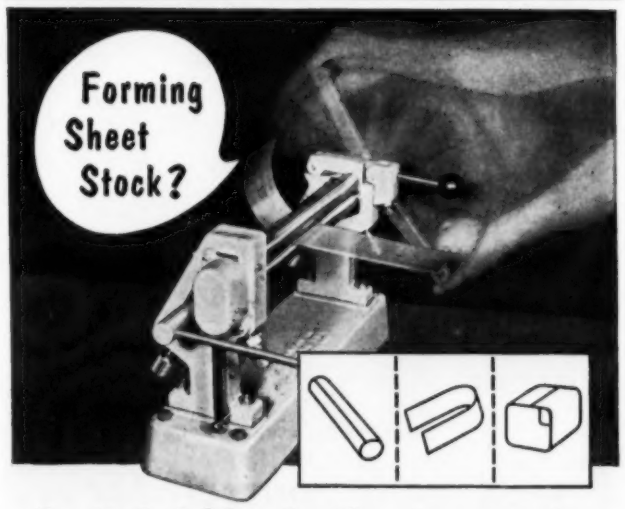


SEND FOR FREE BOOKLET

General Box COMPANY
1859 Miner Street
Des Plaines, Illinois

Factories: Cincinnati; Denville, N. J.; Detroit, East St. Louis, Kansas City, Louisville, Milwaukee; Prescott, Ark.; Sheboygan; Winchendon Mass.; General Box Company of Mississippi, Meridian, Miss.; Continental Box Company, Inc., Houston.

For more details circle NED-436 J3 on enclosed inquiry slip



Do it Quickly, Easily, Accurately with a New DI-ACRO* ROLLER

A cam actuated idler roll—an exclusive feature—makes it possible to form any diameter circle in two operations. Also, bends can be located at any point along the edge of a sheet with straight sections on both sides of the bend. Special rolls available for forming round, other shaped stock. Eight models. Rated capacity to 16 gauge. Forming widths from 6 to 42 inches.

*pronounced Die-ack-ro

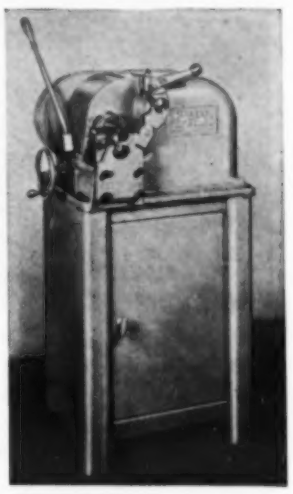
SEND FOR 32-PAGE CATALOG

di-acro PRECISION METALWORKING MACHINES

O'NEIL-IRWIN MFG. COMPANY
354 8th Avenue • Lake City, Minnesota

For more details circle NED-437 J3 on enclosed inquiry slip

POWER TUBE FLARER
handles tube up to 2-in. OD



Designed to put tube flaring operations on a production level, model 232A power tube flarer handles the full range of standard tube wall thicknesses and all tube sizes from ⅛ though 2-in. OD. It will easily flare annealed seamless copper, aluminum, steel and stainless steel tubing, and with accessories, can be used for square-burring operations. The machine is relatively simple to set up, and after short experience can be prepared for production in less than 5 minutes. It weighs approximately 168 lb, and can be furnished with cabinet stand, flaring center, clamp blocks, and square-burring head and blades as accessories. Made by **Parker Appliance Co.**, Dept. NE, 17325 Euclid Ave., Cleveland 12, O.

For more details circle NED-438 J3 on enclosed inquiry slip

200-AMPERE SWITCH
front operated, has visible blades

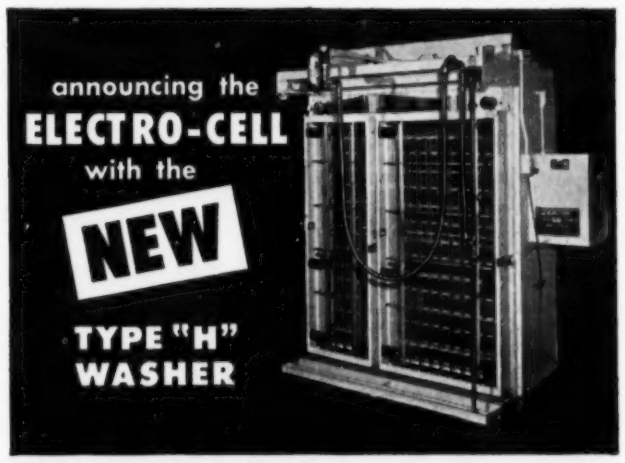
Front operation, a space-saving feature, is incorporated in this Noark 200-amp industrial safety switch. An oversize handle shows at a distance whether or not the switch is off or on. Switch complements a line, which includes 30, 60, and 100 amp models, for use in 250 and 600-v lines. Fuse holder has a pressure spring located under the fuse where it is unaffected by fuse heat. Use of only two joints to each pole contributes to cool operation. Switches cannot fail to open when the handle is in the "off" position. All parts are easily removed and are replaceable. Made by **Federal Electric Products Co.**, Dept. NED, 50 Paris St., Newark 5, N. J.

For more details circle NED-439 J3 on enclosed inquiry slip

Chemical Process Pumps

Allis-Chalmers Mfg. Co.—For handling corrosive and abrasives liquors, five sizes of process pump providing a capacity range from 20 to 1300 gpm at heads up to 260 ft are described and illustrated in 8-page bulletin 52B6615C. Exploded views and cross-section show sealed impeller design. Dimensions are tabulated and a range diagram provided.

For more details circle NED-440 J3 on enclosed inquiry slip

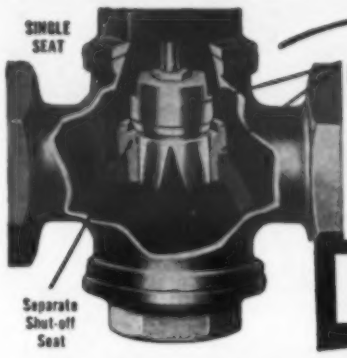


Another "first" from AAF. The Type "H" Washer as an integral part of an ELECTRO-CELL precipitator provides "push-button" control of the cleaning operation. The washer travels on an overhead trackway which keeps it operating freely. The vertical header carrying the spray nozzle is rotated at each end of the travel to provide the necessary 5 degree lead to assure thorough cleaning of the plates.

Write for Bulletin No. 252 giving technical data and descriptive information on this latest AAF achievement to:

AAF American Air Filter COMPANY, INC.
391 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P.Q.

For more details circle NED-441 J3 on enclosed inquiry slip



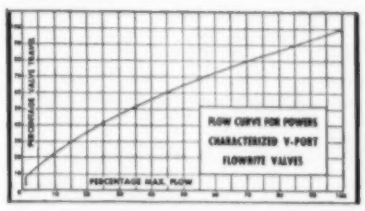
Easily Renewable Plug and Seat
POWERS
CHARACTERIZED V-PORT
FLOWRITE VALVE

Gives Better Control with Less Maintenance

SPECIAL FLOW CHARACTERISTICS—High lift V-Port plug provides proportional flow throughout entire lift of stem as shown in chart below.

WIDE VARIETY OF SIZES—½" valve available with plugs to give 15%, 30%, 60% or 100% of maximum capacity. Easily interchangeable without removing valve from line.

SUPERIOR DESIGN of stainless steel plug and seat reduces wire drawing, insures longer life and tight shut-off. V-Ports do the throttling, protecting separate shut-off seat. Write for circular (a70).



THE POWERS REGULATOR CO., Skokie, Ill.

For more details circle NED-442 J3 on enclosed inquiry slip

new NORGREN

TRANSPARENT BOWL FILTERS

Now, more efficient ¼", ⅜", ¾", and 1" sizes.

AUTOMATICALLY removes corrosive moisture and abrasive foreign matter from compressed air lines.

FLOW: ¼" and ⅜", 0 to 30 cfm.—¾" and 1", 0 to 140 cfm.

PRESSURE: to 150 psi.

TEMPERATURE: 40° to 120° F.

FILTER ELEMENTS, standard: reinforced 200 mesh monel wire screen (74 micron). 25 and 64 micron sintered metal filter elements available.

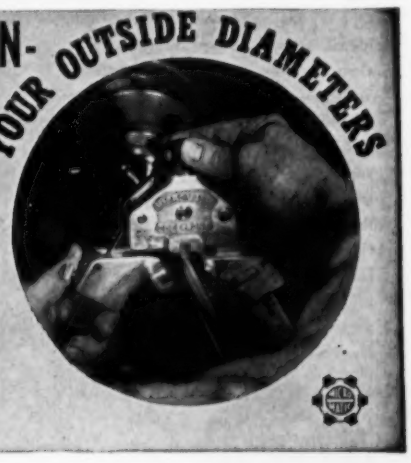
WRITE FOR CATALOG SHEETS 486, 481.

C. A. Norgren CO.
3405 So. Elati St., Englewood, Colo.

PIONEER AND LEADER IN OIL-FOG LUBRICATION FOR 25 YEARS

For more details circle NED-443 J3 on enclosed inquiry slip

PRECISION-FINISH YOUR OUTSIDE DIAMETERS
The Odee-HONE
★ ACCURATE
★ INEXPENSIVE
★ VERSATILE
★ LIGHTWEIGHT



Corrects out-of-roundness, waviness, chatter . . . Generates diametric size within .0001" tolerance . . . Hones all parts from ½" to 2½" in diameter—regardless of length or material . . .

Can be used on any lathe, drill press, electric drill . . .

Simple to set up and operate—no aligning, fixturing or wheel dressing is necessary . . .

Removes a few "tenths" or a few "thousandths" stock in less time than it takes to re-center, indicate a part, and dress an abrasive wheel.

Write to:

MICROMATIC HONE CORPORATION
8100 SCHOOLCRAFT • DETROIT 38, MICHIGAN
Guilford, Conn. • Rockford, Ill. • Los Angeles 23, Cal. • Brantford, Ont., Canada

For more details circle NED-444 J3 on enclosed inquiry slip

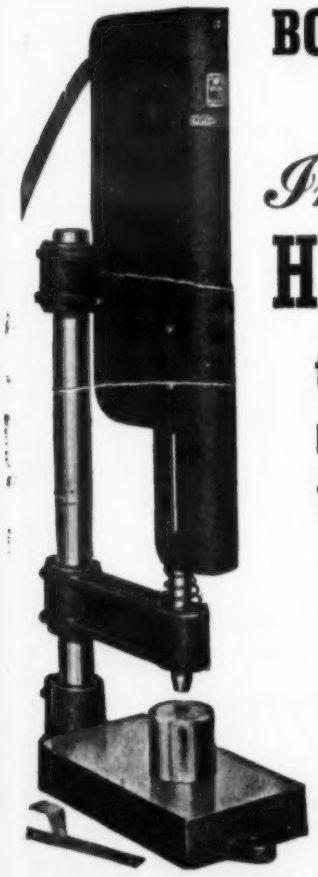
CUT COSTS . . . FASTEN "ON THE DOUBLE" with the Chicago "214" DOUBLE RIVET SETTER

The "214" automatically feeds, inserts and clinches two rivets at a time . . . with speed that may mean a big saving in your fastening costs. 14" throat makes large assemblies easy to handle. For up to 9/64" diameter steel rivets—lengths to 7/8". Quick Change Rotary Type Hoppers and Raceways permit a 5-minute changeover to rivets of different size. Adjustable anvils and riveting centers add to its versatility. Ask us how the "214" can help you cut costs. Send a sample of problem assembly (or blue print) for Free fastening analysis.

FREE CATALOG contains valuable engineering information and rivet specifications plus illustrated descriptions of 26 Chicago Automatic Rivet Setters.

Chicago Rivet & MACHINE CO.
9606 West Jackson Boulevard, Bellwood (Chicago Suburb) Illinois
Branch Factory: Tyrone, Pa.

For more details circle NED-445 J3 on enclosed inquiry slip



BOOST OUTPUT with Impact AIR HAMMER

the efficient modern method for

PUNCHING . . . . . RIVETING
ASSEMBLING . . . . EMBOSSING
FORGING . . . . . FORMING
PEENING . . . . . MARKING
CRIMPING . . . . . CUTTING
BLANKING . . . . . COINING

Ready . . . Mead's new air-powered Impact Hammer . . . weighing only 27 pounds . . . yet having a wallop like a pile-driver! One of its outstanding applications is multiple piercing of large metal sheets before or after forming. It can punch holes as close together as 1¾" on centers. Value of the impact readily adjusted from 4,500 pounds down to only a few ounces. Set ups are quick, easy. Besides innumerable punching operations, with suitable attachments it is capable of upsetting rivets, blanking out soft materials with knife dies, light coining, forging operations, etc. Get complete facts on this versatile, handy new tool and other Mead Air Power devices. Write for Catalog.

MEAD AIR OPERATED DEVICES save precious man-hours!

CATALOG READY
Send for copy of our new Air Power Catalog illustrating, describing many new man-and-money-saving devices.

MEAD SPECIALTIES COMPANY
4114 NORTH KNOX AVENUE
DEPT. NA-93 • CHICAGO 41, ILL.

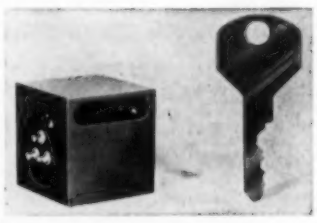
For more details circle NED-446 J3 on enclosed inquiry slip

SMALL TRANSFORMER CORES reduce size and weight

Made of oriented cold-rolled Corisil silicon steel, precut and preformed cores are reported to improve performance and reduce size and weight of small power transformers. Laminations are cut in progressively decreasing lengths by an automatic shear and are stacked into a ring. A hydraulic press forms the ring into rectangular shape. Losses, exciting current, noise level, weight and dimensions can be varied to suit user's operating conditions. Developed by **General Electric Co.**, Schenectady 5, N. Y.

For more details circle NED-447 J3 on enclosed inquiry slip

SUBMINIATURE BLOWER size of 1-in. cube and weighs 1 oz



Capable of delivering 3 cfm, the Minicube subminiature blower is a 1-in. cube weighing 1 oz, including motor and blower housing. Use is for circulation of air and cooling of electronic parts and equipment. It can be installed in hermetically sealed equipment for heat transfer to or from the case. Standard models operate in range from −55 to 85° F, with life of 1000 hr. Other models have wider temperature ranges. Motor turns at speed of 24,000 rpm and is supplied for operation on 6.3 v, 3-w or 26 v, 4-w, 400-cycle operation. Made by **Sanders Associates Inc.**, 131 Canal St., Nashua, N. H.

For more details circle NED-448 J3 on enclosed inquiry slip

CATHODE RAY TUBE is 5-in. square five-gun unit

Providing screen area equivalent to 7-in. round face type, model 7YP1 5-in. square face five-gun cathode ray tube is designed for multi-trace work. Extra sensitive 3D4 deflection plate system is combined with gun arrangement which presents undeflected spot positions ¾-in. from one another in a straight line. Electrostatic focus and deflection are used. Made by **Electronic Tube Corp.**, Dept. ND, 1200 E. Mermaid Lane, Philadelphia 18, Pa.

For more details circle NED-449 J3 on enclosed inquiry slip

FAST FINISH BAKING

Refinished Relay Covers and other Control Parts Formerly Air Dried in 8 Hours—Now a Better Wrinkle Finish is Baked in ONE Hour

Despatch R-S FINISH BAKING OVEN

● Minneapolis-Honeywell Regulator Co. uses the above Despatch R S Oven for refinishing of controls sent in for repair. The black wrinkle enamel on the relay cover shown is baked to an extremely hard, durable finish in 1 hour at 300° F. saving 7 hours of former air drying time! Other parts are baked ½ hour at 350° F. This fast baking of finishes speeds up the entire repair program, improves service to customers.

Despatch R S Ovens are well insulated, very economical, 100% controlled for uniform heat up to 500° F., with temperature variation seldom more than 3° F. Built in a range of sizes for a great variety of applications.

Write for Bulletin on R S Ovens.

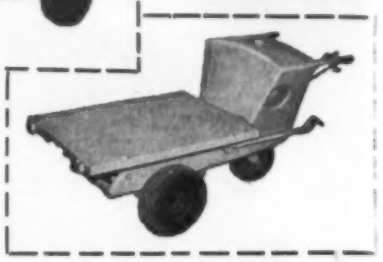
DESPATCH OVEN CO. Established in 1902

Manufacturers of ovens for: Paint Finishing, Dehydrating, Curing, All Industrial and Laboratory Applications

325 DESPATCH BLDG., MINNEAPOLIS 14, MINNESOTA

For more details circle NED-450 J3 on enclosed inquiry slip

BULK HANDLING WITH Bell PRIME-MOVER



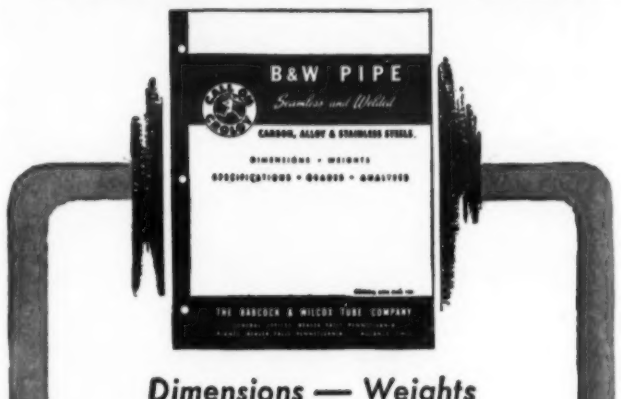
Bucket and Platform interchangeable in a jiffy. Handle up to ¾ ton load — up grades and down — through narrow aisles and doorways.

MOVE your materials — bulk or packaged — with equipment not limited to specific jobs—consolidate those intermittent handling jobs, outdoors or in confined areas—supplement and relieve your specialized equipment and complete the mechanization of your materials handling.

If you're processing bulk materials—disposing of waste and scrap—using materials in maintenance or construction—shifting heavy maintenance equipment—maintaining grounds—or loading, unloading bulk or packaged goods from cars, toss your problems on the Prime-Mover and get the job done—quickly and economically. Prime-Mover Co., Muscatine, Iowa.

For more details circle NED-451 J3 on enclosed inquiry slip

Technical Information



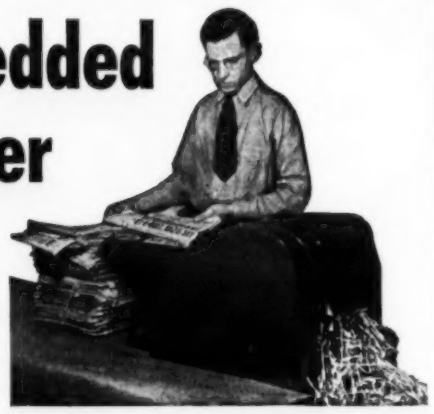
Dimensions — Weights
Specifications — Grades
Analyses
OF
Babcock & Wilcox Seamless and Welded Stainless, Alloy and Carbon Steel Pipe

Send for Technical Data Card 138 TA-1773 (P)

THE BABCOCK & WILCOX COMPANY
TUBULAR PRODUCTS DIVISION
Beaver Falls, Pa.—Seamless Tubing; Welded Stainless Steel Tubing
Alliance, Ohio—Welded Carbon Steel Tubing

For more details circle NED-452 J3 on enclosed inquiry slip

Shredded Paper IS THE IDEAL PACKING MATERIAL



produce it yourself for . . .

(1) Real dollar & cents savings
(2) Minimum inventories
(3) Substantial space savings
(4) Dependable supply

Test a "Silver" paper shredder in your own shop without obligation—Get complete details by writing today to:

INDUSTRIAL SHREDDER & CUTTER CO.
107 Mill Street Salem, Ohio

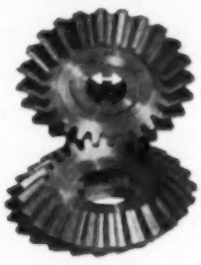
For more details circle NED-453 J3 on enclosed inquiry slip

D.O.James

Established 1888

GEARS For INDUSTRY

SINCE 1888 . . . We have been making many types and sizes of gears for industry. Vast plant facilities of the most modern gear cutting equipment assure capable handling of your *production* or *special* gear requirements.



HELICAL and BEVEL GEARS—From 1" to 60" in diameter and from 24 DP to 1½ DP.
SPUR GEARS—Size range from ¾" to 150" in diameter. 32 DP to ¾ DP.
HERRINGBONE GEARS—Made from 1" to 60" in diameter and from 10 DP to 1½ DP.
SPIRAL BEVEL GEARS—Made from 1" to 30" in diam. and 24 DP to 1½ DP.
WORM GEARS—Made from 1" to 100" in diam. and from 24 DP to 1 DP.

YOUR GEAR INQUIRIES WILL RECEIVE IMMEDIATE ATTENTION
D.O.JAMES GEAR MANUFACTURING COMPANY
1140 W. MONROE ST. • CHICAGO 7, ILL.

For more details circle NED-454 J3 on enclosed inquiry slip

NOW! THE **DYNACLONE**® PATENTED

The ULTIMATE in Dust Filters

1. CONSTANT SUCTION AT DUST SOURCES
2. SELF CLEANING FOR CONTINUOUS OPERATION
3. NO AUXILIARY MOTORS OR BLOWERS (THE MAIN OPERATING FAN DOES THE CLEANING)
4. NO ABRASION OF BAGS BY THE CLEANER

The traveler (T) is open to atmosphere by means of a 4-inch flexible hose. As the traveler contacts the open end of each bag, the negative pressure which exists in the dust chamber draws a blast of air (from the atmosphere) through the bag to thoroughly clean it.

Each bag is cleaned, on an average, once every five minutes, thereby assuring uniform suction at dust sources.

The Dynaclone has now been in operation in many different industries for the past three years. More than half of present orders are from the same customers.

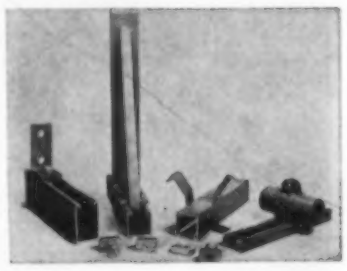
SEND FOR BULLETIN 102

THE W. W. SLY MFG. COMPANY
4748 TRAIN AVENUE CLEVELAND 2, OHIO
New York • Chicago • Philadelphia • Syracuse • Detroit • Buffalo • Cincinnati • St. Louis • Minneapolis • Birmingham • Los Angeles • Toronto

SLY PIONEERS & LEADERS in INDUSTRIAL DUST CONTROL

For more details circle NED-455 J3 on enclosed inquiry slip

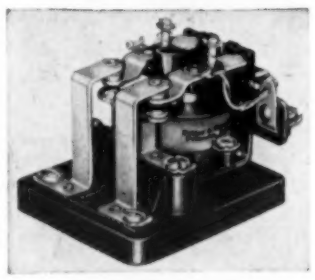
STEEL FRAMING SYSTEM makes racks, frames and supports



Consisting of channel sections and wide range of standard and special fittings, brackets and nuts, Versabar structural steel framing system is extremely versatile in its application. It can be used to construct storage and handling racks of almost any size, scaffolding, pipe supports and clamps, hangers and similar units. Only tools required for assembly are a wrench and a hacksaw. Standard finishes are plain, green enamel and galvanized. Serrated nuts for use with four basic sizes of cold-rolled steel channel are furnished with or without springs. Assembled racks have strength of welded structures. Made by **M-H Standard Co.**, Versabar Div., 513 Communipaw Ave., Jersey City 4, N. J.

For more details circle NED-456 J3 on enclosed inquiry slip

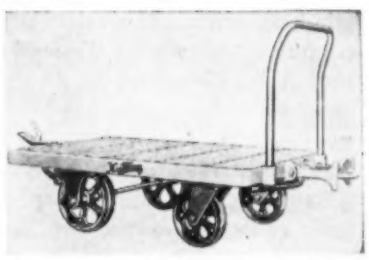
HEAVY DUTY RELAYS have one-piece molded plastic base



Redesign of PR line of heavy duty power relays assures complete insulation for severe service. Mounting dimensions of plastic base relays are same as metal base units. Model 11 relay, illustrated, as well as models 4 and 8 has insulating barrier molded to base between the stationary contacts. Ratings and coil voltage are unchanged from previous metal base units. Made by **Potter & Brumfield**, 270 N. Main St., Princeton, Ind.

For more details circle NED-457 J3 on enclosed inquiry slip

INDUSTRIAL TRAILER in-plant model has caster steer



Trailer trains for low cost in-plant materials handling are readily made up of model 650 caster-wheel steer trailers. It has capacity of 3000 lb and is offered with 30 x 60-in., 36 x 60-in. or 36 x 72-in. platform. Large diameter roller bearing wheels have demountable rubber tires, or semisteel wheels can be provided. Model shown has automatic coupler. Made by **Nutting Truck & Caster Co.**, Dept. B, Faribault, Minn.

For more details circle NED-458 J3 on enclosed inquiry slip

Lightweight **HELIARC TORCH** *is water-cooled...*

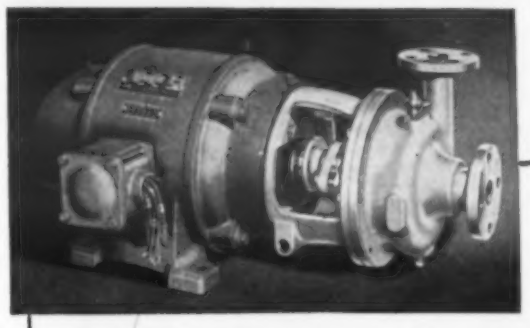
FOR EFFICIENT INERT GAS WELDING AT LOW COST

You can make high quality welds every time with this lightweight, 300 amp. HELIARC HW-10 torch. Both the torch body and power cable have all-internal water-cooling for cooler operation even when welding continuously at full capacity. Yet cleaning is easy for all water passages are straight. Electrode adjustment is quick and simple, too. No wrenches needed. And electrode stub loss is minimized by an improved water-cooling system. Call your nearest LINDE representative today for more details on the HELIARC HW-10 torch.

LINDE AIR PRODUCTS COMPANY
A DIVISION OF UNION CARBIDE AND CARBON CORPORATION
30 East 42nd Street UCC New York 17, N. Y.
Offices in Other Principal Cities
In Canada: DOMINION OXYGEN COMPANY, LIMITED, Toronto

The terms "Heliarc" and "Linde" are registered trade-marks of Union Carbide and Carbon Corporation.

For more details circle NED-459 J3 on enclosed inquiry slip



A low-cost answer to many acid-pumping problems!
AMPCO* Centrifugal Pumps

Take the headache out of pumping acids — use Ampco Centrifugal Pumps. Made of Ampco aluminum bronzes, they have exceptional resistance to corrosion. And they also resist the damaging effects of cavitational erosion, deformation, and wear.

That's why Ampco Pumps are ideal for handling difficult liquids such as hot sulfuric acid, hot acetic acid, hydrofluoric acid, fatty acids — as well as dyestuffs, caustics, brine, and other corrosive liquids.

Best of all, Ampco Pumps *sell at standard pump prices* — even with all their extra advantages. They're available in sizes from fractional flow to 600 gpm — with close-coupled or pedestal mounting. Write for more information today.

AMPCO® **AMPCO METAL, INC.**
Department NE-9 • Milwaukee 46, Wis.
*Reg. U. S. Pat. Off.

For more details circle NED-460 J3 on enclosed inquiry slip

JOHNSON Self-Lubricating Ledaloyl bearings from stock

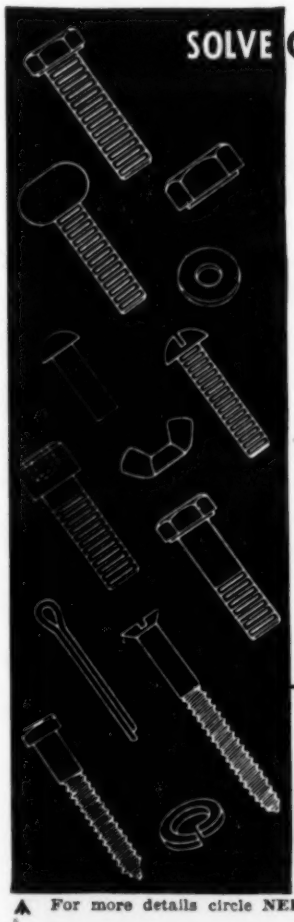
• A large selection of these powder metallurgy sleeve bearings is available in any quantity from Johnson distributors' stocks . . . plain, flanged and self-aligning styles. They are extremely low in cost, as they are molded to shape from powdered pre-cast bronze and require no machining. Ledaloyl bearings are impregnated with oil . . . therefore, self-lubricating. Ideal for hard-to-lubricate places. Write for catalog.

JOHNSON BRONZE COMPANY
580 S. Mill Street, New Castle, Pennsylvania

JOHNSON B BEARINGS *Sleeve-Type*

For more details circle NED-461 J3 on enclosed inquiry slip

SOLVE CORROSION PROBLEMS!



Select HARPER *Everlasting Fastenings*

Harper can supply corrosion-resistant fastenings to meet every need. Call Harper for bolts, nuts, screws, washers, rivets and special fastenings of brass, silicon bronze, naval bronze, Monel, aluminum, all stainless steels. Over 7,000 different items ready for prompt delivery. See your Harper Branch or Distributor or write for catalog.

HARPER
EVERLASTING FASTENINGS

The H. M. Harper Company
8212 Lehigh Avenue
Morton Grove, Illinois
Please send me Harper Catalog 25.
Name.....
Company.....
Address.....
City.....State.....

For more details circle NED-462 J3 on enclosed inquiry slip

THE PROBLEM

How to weigh large castings conveniently and accurately.

This 35 ton steel casting was easily weighed by placing three Baldwin SR-4 Load Cells under it.

THE BALDWIN SOLUTION

Baldwin SR-4 devices enabled a large Eastern foundry to weigh faster and more accurately this huge semi-rotor, built for a Canadian hydro-electric plant. Three 50,000 lb. SR-4 Type C Load Cells were used. Output of each cell ran to an SR-4 manual null-balance indicator. Here each cell was read separately and totalled; other cases might better use an SR-4 weighing system electrically adding cell outputs.

Baldwin SR-4 devices have *uses unlimited* in industry . . . measuring load, pressure or torque economically, speedily and accurately. For latest technical information write to Dept. 3129, Baldwin-Lima-Hamilton Corporation, Philadelphia 42, Pa.

TESTING HEADQUARTERS

BALDWIN-LIMA-HAMILTON

General Offices: Philadelphia 42, Pa. ★ Offices in Principal Cities

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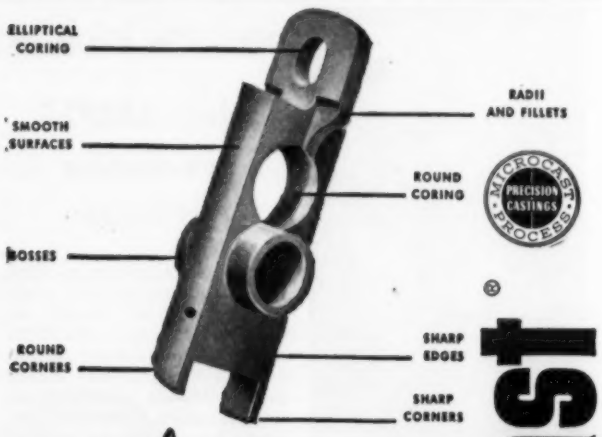
Are You One OF THE COMPANIES STILL HANDLING DRUMS AND BARRELS THIS WAY

It takes only ONE MAN to pick up and move loads up to 800 pounds—when you use a Sabin Barrel Truck. Operation is easy. Run truck up to container, hook on at top and pull back on handle to load the truck. Third Wheel Feature assures better balance and safer movement of loads.

Write for bulletin 48-A

The Sabin Machine Co.
6536 Carnegie Ave.
CLEVELAND 3, OHIO

▲ For more details circle NED-464 J3 on enclosed inquiry slip ▲



unlimited design possibilities

The Microcast Process of precision investment casting opens new fields of design to the product development engineer. Tough, virtually non-machineable high-heat metals and alloys can now be incorporated economically into your product's design through the Microcast Process. Design for little or no machining—for better parts at less cost—for longer life, and for functional improvements from the use of better metals and alloys. Write for booklet on Microcast—Also new color movie available without charge.

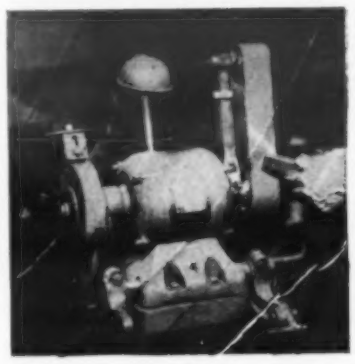
MICROCAST DIVISION

Austenal Laboratories, Inc.
224 East 39th Street,
New York 16, New York
7001 South Chicago Ave.,
Chicago 37

microcast ®

▲ For more details circle NED-465 J3 on enclosed inquiry slip ▲

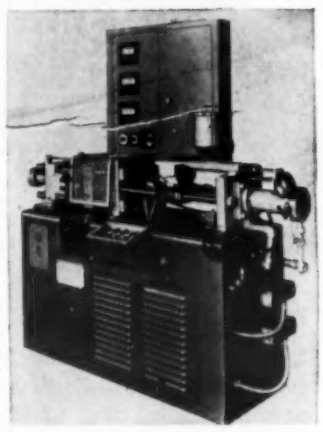
GRINDING & POLISHING ATTACHMENT
either end or slack belt used



Applicable for wide variety of grinding and polishing operations, the Adapt-A-Belt attaches to bench or portable grinders, or clamps on lathes, milling machines, drill presses or pedestal grinders. Advantages include use of dynamically-balanced rubber-covered contact wheels in various diameters, widths and durometer hardness as well as soft or hard cloth wheels. Grinding can be done with either end or slack belt. Model A-1 and A-2 use abrasive belts up to 1 and 2 in. wide, respectively. Made by **Curtis Machine Corp.**, 1302 E. Second St., Jamestown, N. Y.

▲ For more details circle NED-466 J3 on enclosed inquiry slip ▲

INJECTION MOLDING MACHINE
shoots full 2-oz shot of plastic



Fully automatic, model 72 horizontal hydraulic plastic injection molding machine will shoot a full 2-oz shot of material and hold more than 20½ in. in mold area. It operates at 525 cycles per hour either manually, semiautomatically, or fully automatically and repeat. Standard 8 x 9 DME mold blanks and others can be installed on the machine, which is supplied complete with standard 5-hp motor and starter and 220-v heater. Motor and hydraulic equipment are fully enclosed and readily accessible in a welded steel base. Stainless or nickel steel material cylinder gives even material flow for its full length without dead spots, and a special four-point toggle clamp is supplied with calibrated adjusting nuts for mold equipment. Made by **Moslo Machinery Co.**, 2447 Prospect Ave., Cleveland 15, O.

▲ For more details circle NED-467 J3 on enclosed inquiry slip ▲

Electronic Measuring Instruments

Brush Electronics Co.—"Instruments for Modern Measurements" is title of 34-page catalog illustrating and describing more than 37 units. Among those included are instruments for electrical, physical, resistance-welding, textile, ultrasonic energy and electro-acoustical measurements. Applications and specifications are given for each unit.

▲ For more details circle NED-468 J3 on enclosed inquiry slip ▲

change from cord to Cordomatic* TROUBLE LIGHT REELS

* Reg. U.S. Pat. Off.

GIVES YOU LIGHT WHEN YOU WANT IT—WHERE YOU WANT IT!

$9.95
FOR 20' EXTENSION MODELS
25' MODELS—$14.95
40' MODELS—$19.95

√ MODERN √ EFFICIENT √ ECONOMICAL

No more tangling in a clumsy wire "booby trap" that's always in your way, causing short tempers and painful accidents! Save time, trouble and money the Cordomatic way. Cordomatic works like a window shade—just pull out the length of cord you need, and it locks in place automatically! A flick of the wrist, and z-z-zip, it rewinds itself. One Cordomatic Trouble Light Reel will outlast many ordinary drop cords.

Available Through Your Local Automotive Jobber

No installation costs. Just hang up, plug in!

Foolproof "Gravity Action" Recoil Mechanism . . . locks at any desired length!

U/L Approved #18-2 S.V.O. Neoprene jacketed, kink-proof cord! Oil and water resistant.

New "Stubby" Handle! 100% Neoprene with protector ears.

New type "swing open" guard.

Unconditionally guaranteed for one year!

Cordomatic DIVISION OF THE VACUUM CLEANER CORP. OF AMERICA

PLANT NO. 2: CROSKEY ST. & INDIANA AVE.
PHILADELPHIA 32, PENNA.

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REMOVE STUBBORN GREASE AND DIRT FROM METAL PARTS — EASIER, FASTER, MORE ECONOMICALLY WITH . . .

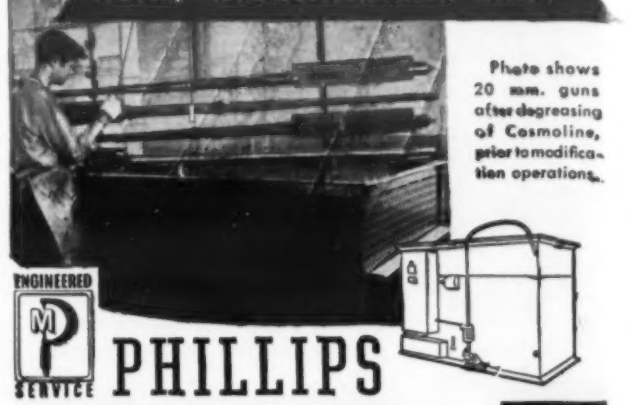

Photo shows 20 mm. guns after degreasing of Cosmoline, prior to modification operations.

ENGINEERED SERVICE PHILLIPS

VAPOR DEGREASERS

SEND FOR YOUR FREE COPY OF NEW ILLUSTRATED DEGREASER BULLETIN!

THE most heavily greased up parts will come clean easier and faster in a Phillips degreaser. High vapor temperature (250.2° F.) not only causes more dissolved grease to run off the metal, but makes for faster degreasing too. Wherever you have parts to clean, large or small, before plating, painting, rustproofing, service and repairwork, etc., you can do it better, faster and more economically with a Phillips degreaser. There's a standard model to meet your needs. Check with Phillips today.

3463 Touhy Ave. • Chicago 45, Illinois

Phillips MANUFACTURING COMPANY

Vapor Degreasers • Solvents • Parts Washers

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SOLID carbide for greater rigidity, increased accuracy

Superior grade of carbide assures longer tool life

Master-machined for greater concentricity, precision work

Operates efficiently at grinding wheel speeds

No down time for dressing — maintains size and shape

Most efficient tool for small hole finishing

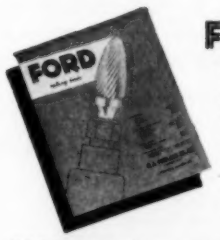
Save 75% of internal grinding time with

FORD

SOLID CARBIDE

Grinding Burs

Yes, in only one-fourth the production time required by use of mounted points, FORD solid carbide grinding burs will remove material hardened up to 68 RC. Save down time, tool cost. Ford carbide burs can be resharpened many times and still retain new-tool accuracy. Let us prove it. Write today.



FORD -- *the complete line!*

HSS ground cutters, rotary files and countersinks. CARBIDE cutters, end mills and grinding burs.

Get complete details plus operational data on over 300 Ford rotary tools in new Catalogue No. 207.

FORD regrinding service adds tool life, reduces tool costs!

M. A. FORD MFG. CO., INC.

Pioneers in rotary tools for more than 30 years
721 W. River St., Davenport, Iowa

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NORTHERN HI-LIFT OVERHEAD CRANES

For Safety—Durability—Dependable Operation with minimum maintenance—these NORTHERN HI-LIFT CRANES are especially developed for low headroom operation and floor control. Let us send you further details in

BULLETIN HL-115-R

NORTHERN ENGINEERING WORKS, 2615 Atwater St., Detroit 7, Mich.

NORTHERN CRANES AND HOISTS

For more details circle NED-472 J3 on enclosed inquiry slip

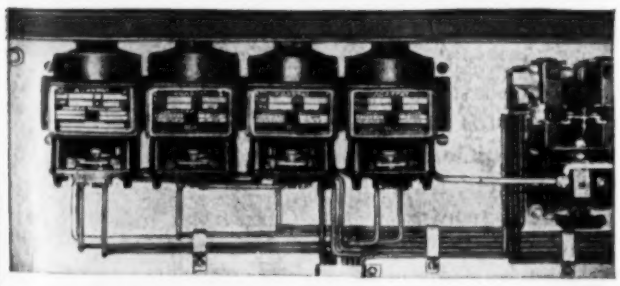
Special cold headed products

...nails • rivets • screws... made to order

...and to your specifications in any metal. Large raw material inventory for your convenience. Send drawing—advise quantity. *Free catalog on request.*

JOHN HASSALL INC.
P.O. Box 2178, Westbury, N. Y.

For more details circle NED-473 J3 on enclosed inquiry slip



Cleaver-Brooks chooses Agastat time delay relays

for Boiler Control Circuit Timing

4 AGASTATS handle these applications:

1... allows 30 seconds for warmup of tubes in electronic control relay

2... delays fuel delivery to burner for 15 seconds to permit boiler purge

3... controls a 15-second ignition period

4... delays full capacity delivery of fuel oil to burner for 3 (or 5) seconds, facilitating smooth lighting

AGASTAT time delay relays are solenoid actuated and pneumatically timed. They are light, compact, *dust-proof* and can be furnished to operate mounted in any position.

Write for Bulletin—Dept. A3-95

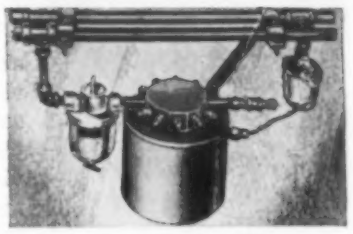
AGA

Division of Elastic Stop Nut Corporation of America
1027 Newark Avenue, Elizabeth 3, New Jersey

For more details circle NED-474 J3 on enclosed inquiry slip

INSECT CONTROL SYSTEM

atomizer units used on air lines



Insect infestations can be controlled in buildings of all kinds by an automatic system that spreads a fine insect-killing fog through all areas simultaneously. Compact atomizer units are attached by pipeline both to an insecticide reservoir located on the plant roof and to the plant compressed air or steam line. Liquid insecticide is broken down into 8-micron size droplets which remain suspended in the air and penetrate all openings and crevices. Equipment can be centralized and turned on by a single valve. Each system is tailored to requirements of a particular plant. Made by **West Disinfecting Co.**, Dept. DE, 42-16 West St., Long Island City 1, N. Y.

For more details circle NED-475 J3 on enclosed inquiry slip

DEBURRING CHIPS

fine-grained, tough, long-wearing

Available to users of Roto-Finish processes, new Coruloy T tumbling and deburring chips are particularly useful for removing large quantities of both ferrous and nonferrous metals, especially where deburring is the primary objective. Chips are fine-grained, tough and long-wearing. Also effective for deburring and descaling hardened steel parts, they are available in all the regularly listed Roto-Finish chip sizes. Made by **Roto-Finish Co.**, 3702 Milham Rd., Kalamazoo, Mich.

For more details circle NED-476 J3 on enclosed inquiry slip

UNIT HEATER

fired with gun-type oil burner

For commercial and industrial locations where high air delivery is required, unit heater has an output of 220,000 btu/hr when fired with a 2 gal/hr capacity nozzle. A ½-hp fan gives a rated delivery of 5730 cfm, and will "throw" the heated air for an effective distance of 150 ft. The unit is thermostatically controlled, and measures 49½-in. high, 39-in. wide and 21-in. deep. It has vertical flue travel permitting installation with simple flue, and is provided with fittings for mounting either on a platform or floor or by suspension from a ceiling. Front louvers are adjustable to vary heat direction. Made by **Delta Heating Corp.**, Trenton 8, N. J.

For more details circle NED-477 J3 on enclosed inquiry slip

Presents
A Self-Contained

Adjustable Loading Dock

The new model 72-U was designed to meet the need for a completely self-contained unit. It can be anchored in front of existing dock facilities or recessed within your present dock.

CHECK THESE FEATURES

- *Precise Carrier to Dock Alignment*
- *Safety Curbs and Treads*
- *Finger-Tip Adjustment*
- *One-man Operation*
- √ *No Fluid or Electric Controls*
- √ *No Lubrication Necessary*
- √ *No Piping*
- √ *No Motors*

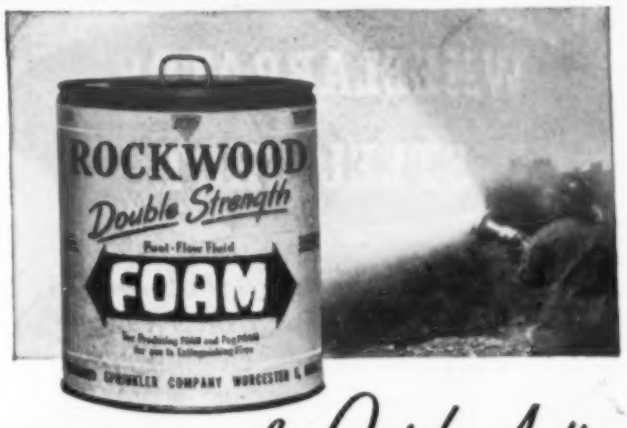
Rite-Hite's Also Available in Other Standard Models

• *Write for literature*

RITE-HITE Keeps Traffic on the GO!

LOOMIS MACHINE CO. RITE-HITE DIVISION
Dept. 14, CLARE, MICHIGAN

For more details circle NED-478 J3 on enclosed inquiry slip



USE LESS... *for Quicker Action*

Rockwood's Double Strength FOAM Liquid is faster spreading, more fluid and flows freely at sub-zero temperatures. It covers burning surfaces faster, seals off combustible vapors and flows freely around obstruction. Three parts of FOAM mixed with 97 of water form an excellent foam blanket that quickly re-seals if broken.

FOAM saves in many important ways. Saves cost of use, because *only 3%* of it forms your extinguishing agent. Saves storage space and shipping costs because it's concentrated. Saves vital time by its speedy, thorough action.

Write for *"Fire Fighting Products,"* Rockwood's illustrated catalog. Distributors in all principal cities.

ROCKWOOD SPRINKLER COMPANY
Engineers Water . . . to Cut Fire Losses
44 HARLOW STREET, WORCESTER, MASS.

For more details circle NED-479 J3 on enclosed inquiry slip

Speed up Machine Cleaning with TORNADO®

Want a tip on a way to make short work of an ordinarily messy and time consuming job? Follow the lead of the Dukes Co., Chicago manufacturers of hydraulic equipment. Their maintenance men now use Tornado vacuums to clean muck out of coolant tanks and sumps.

You don't need to be a contortionist when you use handy Tornado accessory tools—and they do the job in a matter of seconds! Contrast this method with the job of hand scooping oily residue from a hard-to-reach sump bottom. No conversion necessary for wet or dry vacuuming either! Tornado is ready to clean dirt from the floor or chips from the machine table instantly.

If you want greater efficiency from your productive equipment and a cleaner, more efficient shop, find out more about Tornado.

WRITE FOR BULLETIN 600

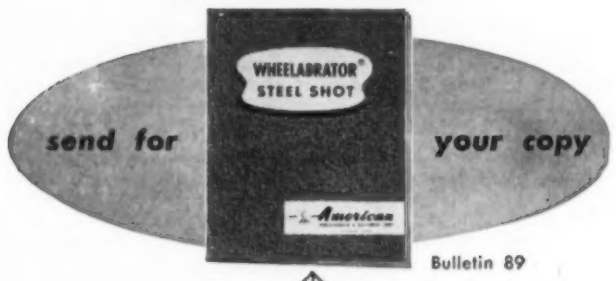
BREUER ELECTRIC MFG. CO.
5116 North Ravenswood Avenue • Chicago 40, Illinois

For more details circle NED-480 J3 on enclosed inquiry slip

WHEELABRATOR® STEEL SHOT

the hard working shot for blast cleaning that works longer hours to lower cleaning costs per ton

this bulletin tells how



send for your copy

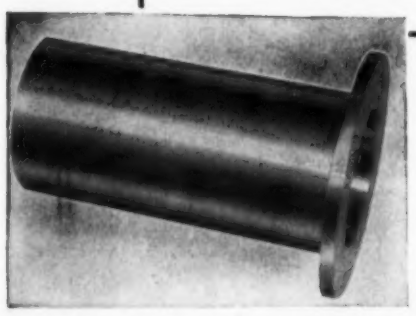
Bulletin 89

American WHEELABRATOR & EQUIPMENT CORP. 508 S. Byrkit St. Mishawaka, Indiana

▲ For more details circle NED-481 J3 on enclosed inquiry slip ▲

PROMET THE Engineered BRONZE

BEARINGS
BUSHINGS
WEARING PARTS
(machined or rough cast)



Manufacturers of oil mill machinery know that they must use good bearings. Many look to American Crucible for recommendation as to the alloy which has corrosion-resistance and ability to withstand unit pressures and impact loads prevailing in the particular application.

The American Crucible machine shop is equipped with an unusually wide assortment of machine tools, all manned by trained personnel for the processing of the widest range of sizes and shapes.

When American Crucible serves your bearing and wearing requirements, you get a money-back guarantee of longer service and lower maintenance cost.

Castings to your patterns—any size, shape or section up to 3,000 lbs. Pattern-making, designing and machining.

Write today for FREE LITERATURE and service data sheets. Send blueprints, conditions of operation, and other data for recommendations and quotations.

THE AMERICAN CRUCIBLE PRODUCTS CO.
1327 Oberlin Avenue Lorain, Ohio, U.S.A.

▲ For more details circle NED-482 J3 on enclosed inquiry slip ▲

A New 2-in-1 TAPE
• INSULATES
• PROTECTS
All in One Neat Operation

IDEAL PLASTIC Electrical Tape

- 2-way Stretch
- High dielectric
- Fits snugly
- Insulates perfectly
- Saves space
- Sticks tight
- Long life

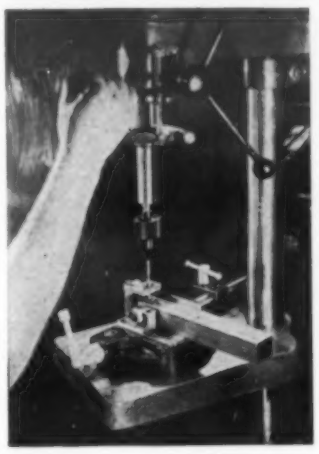
Saves work on many jobs—does the work of both friction and rubber tape. Resists abrasion. Resistant to weather, oils, greases and many corrosive chemicals. Two sizes ¾" x 20' and ¾" x 60'.

TRY IT FREE!

IDEAL INDUSTRIES, Inc. (IDEAL)
1032 Park Avenue, Sycamore, Illinois
Please send me FREE sample of IDEAL Electrical Tape.
Name_____
Company_____
Address_____
City_____ Zone____ State_____

▲ For more details circle NED-483 J3 on enclosed inquiry slip ▲

SAFETY DRILLING VISE gives fast product setups



Huskier than the previous model, instant change Float-Lock safety vise is designed for fast setups on production pieces. Three bosses provide for easy jig attachment. Vise locks securely by a quarter turn of the T-handle at any position on the table. When not in use, vise can be swung out of way completely. It is offered with 9 to 12-in. jaw opening and is particularly adaptable for work holding, for end drilling and centering, angle drilling, centering long rounds and drilling sheet metal. Made by **American Machine & Foundry Co.**, Wahlstrom/Float-Lock Sales Dept., Room 1507A, 511 Fifth Ave., New York 17, N. Y.

▲ For more details circle NED-484 J3 on enclosed inquiry slip ▲

SLIDE CHART provides spline gage tolerances

Giving the basic tolerances for spline plug and ring gages having pitch diameters up to 8 in., slide chart is useful both to designers and inspectors. Notes concerning tooth thickness, parallelism, concentricity and major and minor diameter tolerances are given, together with other information and charts. Chart is available free of charge from **Vinco**, Dept. NED, 8855 Schafer Highway, Detroit 27, Mich.

▲ For more details circle NED-485 J3 on enclosed inquiry slip ▲

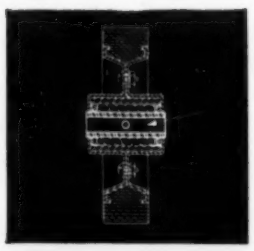
POWER DISTRIBUTION PLUG installed in 3 minutes

Getting power from overhead busway to machines below is facilitated by improved FG Flex-A-Plug designed for use with Trumbull Flex-A-Power distribution system. Installation by hanger clips can be done in 3 minutes. Interior of plug operates on circuit breaker principle of arc interruption. Use of grid pins, magnetic repulsion and other circuit breaker features give plug interior a high momentary current rating and ability to resist heavy current surges. Heavy gage steel side shields protect copper stabs as does the phenolic shield which encases them. Plug is available in 30, 60, 100 and 200-amp ratings. Made by **General Electric Co.**, Trumbull Electric Dept. M-3, 41 Woodford Ave., Plainville, Conn.

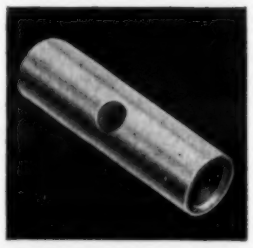
▲ For more details circle NED-486 J3 on enclosed inquiry slip ▲

Tube Talk THE "HOW-TO" COLUMN

PROBLEM:
To find suitable material for spacer bushing of rubber-tired, steel-disc truck wheels made by Jarvis & Jarvis, Inc., Palmer, Massachusetts. Former tubing used did not have uniformly smooth surface, was hard to clean off and a source of bearing trouble.



SOLUTION:
MT 1015 Carbon Steel Seamless Cold-drawn Tubing, supplied by Superior Tube Company, provided smooth surface required, plus close temper control for machining.



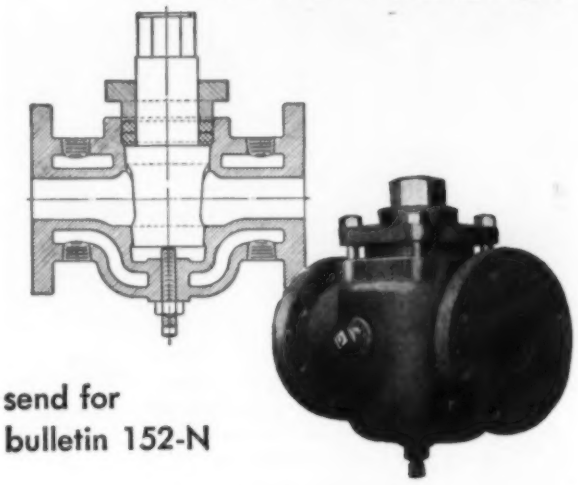
RESULT: Bearing troubles completely cleared up since adoption of Superior tubing. Jarvis & Jarvis also reports Superior tubing easy to cut, chamfer and drill, and "technical help from Superior distributor excellent."

Suggestion—Write for information and literature today.

SUPERIOR TUBE COMPANY
2018 Germantown Ave., Norristown, Pa.

▲ For more details circle NED-487 J3 on enclosed inquiry slip ▲

Now—
JACKETED FITTINGS in *Ni-Resist*



send for bulletin 152-N

Parks-Cramer Company
FITCHBURG, MASSACHUSETTS

▲ For more details circle NED-488 J3 on enclosed inquiry slip ▲

Delicate Riveting Jobs

CAN BE PERFORMED RAPIDLY AND UNIFORMLY BY PEINING WITH THE

HILL PNEUMATIC RIVETER

CONTROLLED IMPACT and AUTOMATIC TIME CYCLE make it possible to duplicate the work of highly skilled mechanics — at high speed and with unskilled operators. Perfect heads can be formed on long slender rivets, fragile fulcrum pins, and other delicate parts without upsetting or distortion. The Hill Riveter will produce uniform work with out constant adjustment and maintenance.

LET US RIVET SAMPLES OF YOUR PARTS — NO OBLIGATION

HILL MACHINE CO.
1309 EDDY AVENUE, ROCKFORD, ILLINOIS

▲ For more details circle NED-489 J3 on enclosed inquiry slip ▲

For BAKING, CURING, DEHYDRATING, etc.
on an efficient, production line level

CHROMALOX *Electric* **RADIANT PANELS**

Ready to install, 1-ft. x 4-ft. and 2-ft. x 4-ft. pre-engineered Chromalox Panels generate intense, far-infrared energy to meet many processing and finishing heat needs. Tunnels in sizes to fit the work, can be quickly assembled in minimum space. Color-blind far-infrared radiation is absorbed efficiently by all colors and textures, can be controlled precisely, and gives other advantages possible with no other heat source!

Send For Bulletin CS-605

It gives details on pre-engineered Chromalox Electric Radiant Panels and shows how they meet your heat requirements.

IB'35

Radiant Heat Div., EDWIN L. WIEGAND CO., 7509 Thomas Blvd., Pittsburgh 8, Pa.

See other ad on pg. 4

CHROMALOX

ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-490 J3 on enclosed inquiry slip

FREE *Send for your copy today*

NOW • • • You can choose the RIGHT Industrial Work Glove for EACH Job . . .

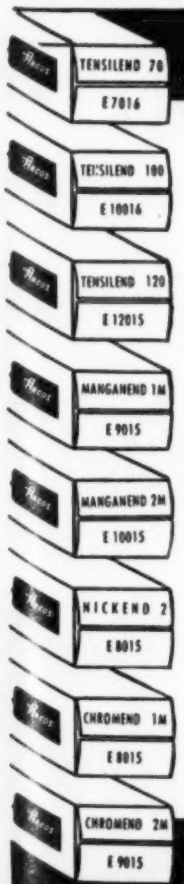
by using the handy Hood Performance Chart

Chart shows comparative wear and chemical resistance of Hood Neoprene, Rubber and Plastic Coated Gloves; catalog contains eleven more pages of illustrations and description of Hood Industrial Gloves; the choice for *every* job in *any* industry.

HOOD RUBBER CO.
Watertown, Mass.

For more details circle NED-491 J3 on enclosed inquiry slip

Available For Your Use . . .

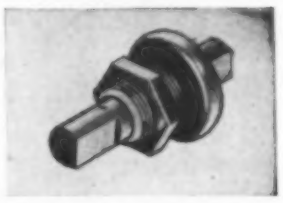


Practical, Fact-Filled Data Sheets give complete information on every grade of Arcos Low Hydrogen electrodes listed...*applications, weld metal analysis, mechanical properties, welding characteristics.* Write today for the Data Sheets that will guide you in the selection of the "right" electrode to produce sound high quality weld metal.

ARCOS CORPORATION
1500 South 50th St., Philadelphia 43, Pa.

For more details circle NED-492 J3 on enclosed inquiry slip

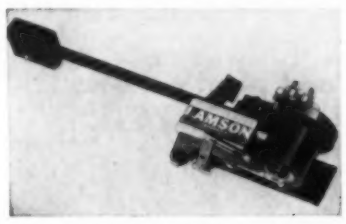
ROTARY SHAFT SEAL
does not require lubrication



Designed to pressure seal, waterproof and moisture seal panel mounted shafts in such equipment as hand-operated electrical circuit and tuning mechanisms, series 1100 rotary shaft seals do not require lubrication. Design combines the flexibility and sealing quality of rubber, low friction resistance of metal against bearing material and corrosion resistance. Shafts are in one piece to eliminate backlash. Three standard sizes are available. Made by **H. H. Buggie, Inc.**, Dept. CRT, 700 Stanton St., Toledo 4, O.

For more details circle NED-493 J3 on enclosed inquiry slip

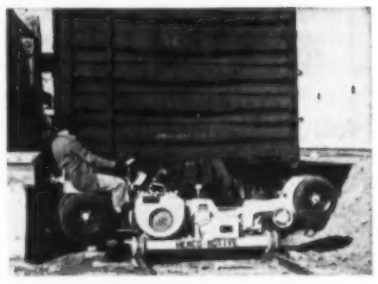
OVERLOAD PROTECTOR
designed to protect chain drives



Consisting of an eccentrically located sprocket counterbalanced by a weighted arm, this chain overload protector can be adjusted to operate at any chain tension up to 1000 lb. Manual resetting is required after the device has been tripped before drive can become operative again. With an eccentric sprocket shaft of 0.875-in. diameter, unit can be adapted to chain sizes from ½ to 1¼ in. Basic applications are single and double sprocket vertical, double sprocket rotary and single sprocket horizontal chain drives. Made by **Lamson Corp.**, Dept. C18, Syracuse 1, N. Y.

For more details circle NED-494 J3 on enclosed inquiry slip

RAILROAD SWITCHER
combines rail and road operation



Powered by an air-cooled engine, HemcO-Motive railroad car switcher and spotter operates either on rails or the ground. Draw bar pull of 7400 lb is sufficient to move three fully loaded cars or six to eight empties. Speeds up to 10 mph are possible. Cars can be moved from either side, with ample visibility for the operator to see the full length of the train. Unit achieves necessary traction by transferring weight of car being switched onto its driving wheels through a built-in hydraulic linkage system. Made by **HemcO Mfg., Inc.**, Dept. D, Argonia, Kans.

For more details circle NED-495 J3 on enclosed inquiry slip

QUICK-QUENCHING *Extends Contact Life*

ALLIS-CHALMERS New Size 4 STARTER

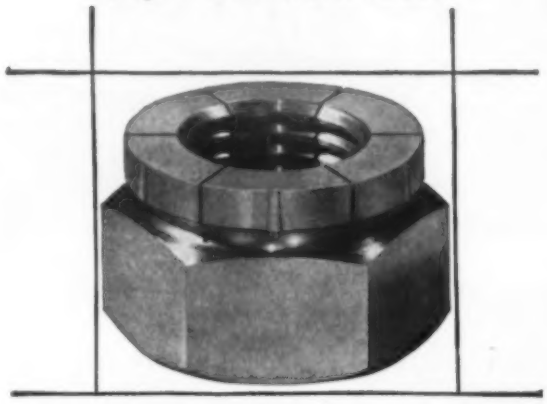
This size 4 magnetic, full voltage starter features a 150-amp, 600-volt contactor utilizing a quick-quenching arc centering blowout . . . a new principle of arc interruption which minimizes destructive burning and pitting of contacts. Contactor is clapper-type with single break contacts. Melting alloy-type relays provide overload protection. Starter available in general and special purpose enclosures.

There is an Allis-Chalmers starter for every motor need. Contact your nearby A-C representative or write for selection guide 14B7733, Allis-Chalmers, Milwaukee 1, Wisconsin. A-4047

ALLIS-CHALMERS

For more details circle NED-496 J3 on enclosed inquiry slip

they won't work loose



FLEXLOC Self-Locking Nuts lock and stay tight, no matter how severe the vibration. Yet they can be easily removed and reused repeatedly. They are stop nuts too; they stay put in any position on a bolt when the locking threads are fully engaged. And FLEXLOCS are one piece, all metal—nothing to assemble, come apart, lose or forget. See your local industrial distributor for literature and samples or write SPS, Jenkintown 24, Pa.

Our Fiftieth Year : A START FOR THE FUTURE

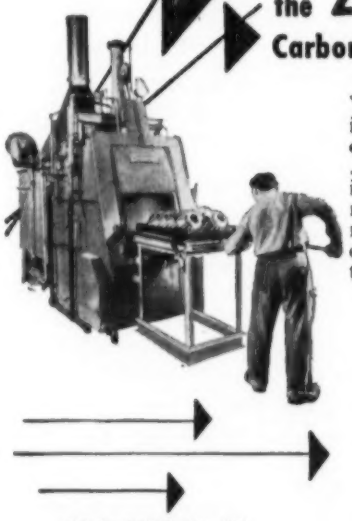
FLEXLOC LOCKNUT DIVISION

SPS
JENKINTOWN PENNSYLVANIA

For more details circle NED-497 J3 on enclosed inquiry slip

5 FURNACES IN ONE

the *LINDBERG* Carbonitriding Furnace



Yes, it's many furnaces in one. It's designed not only for carbonitriding . . but also for hardening, carburizing, annealing, and carbon restoration. It's self-contained . . it's easy to maintain!

Heating is by new type, gas-fired, vertical radiant tubes. They weigh only 29 pounds each, can be changed in two minutes, and usually last two or three times longer than old conventional type radiant tubes.

Ask for Bulletin No. 241

LINDBERG FURNACES

Lindberg Engineering Company • 2492 West Hubbard Street • Chicago 12, Ill.

For more details circle NED-498 J3 on enclosed inquiry slip

BRUNING ELECTRIC ERASER

Saves hours of work . . . Protects valuable drawings

ERASER CAN'T FLY OUT . . . valuable drawings are safe with a BRUNING Electric Eraser. Exclusive *7-inch* eraser feeds through hollow shaft — can't fly out and let ferrule gouge paper.

SAVES TIME . . . adds extra hours of working time by eliminating tiresome, finger-cramping manual erasing.

RUNS COOL AND QUIET . . . permanently lubricated bearings mean no overheating in steady operation, are mounted in rubber for vibration-free performance. Only one moving part.

EASY TO USE . . . lightweight aluminum housing fits fingers like a pencil. Eraser is extended or replaced in seconds.

Phone or write Bruning—there's an office near you—for more facts and figures on how to save time and tempers with Bruning Electric Eraser. CHARLES BRUNING COMPANY, Dept. S93 4700 Montrose Ave., Chicago 41, Ill.

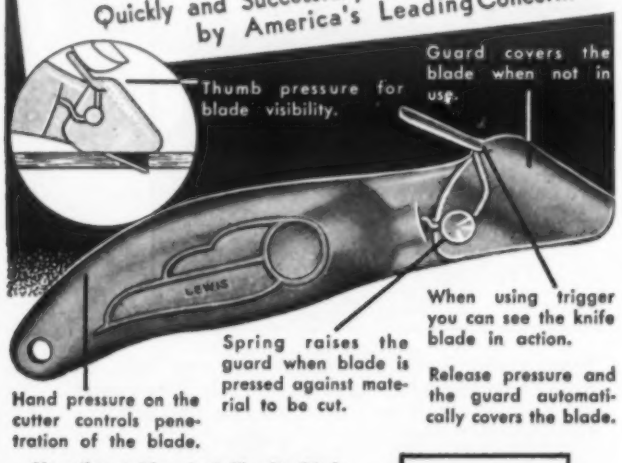
A-3-3

BRUNING
Everything for the Engineer and Draftsman

For more details circle NED-499 J3 on enclosed inquiry slip

NEW! LEWIS AUTOMATIC TRIGGER ACTION SAFETY KNIFE

Quickly and Successfully Adopted for Use by America's Leading Concerns



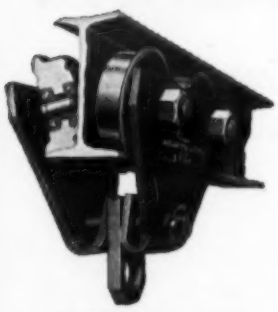
No other cutting tool like it. Eliminates the hazards of exposed cutting blades. You must operate it to appreciate its swift and sharp cutting . . . always automatically ready for use. Trigger action gives full blade visibility with safety.

Retail Price $1.50

FLASH BOX OPENER CO., Inc.
52 W. Houston St. • New York 12, N. Y.

▲ For more details circle NED-500 J3 on enclosed inquiry slip ▲

Be sure to see the HARRINGTON MODEL D before buying an I-Beam Trolley



Model D with cutaway of wheel to show enclosed ball bearings

These durable, smooth-rolling trolleys have the following features:

- **Inclined side frames, cut from rolled steel plate, and shaped to support the link pin and permit all four wheels to bear uniformly on the beam flange**
- **Wheels, with straight chilled treads, revolve on chrome nickel steel ball bearings held by strong axles**
- **Adjustment for width permits use on several different beam sizes**

For fast, easy movement of loads on straight or curved track, buy Harrington Model D Trolleys. Consult the local classified telephone directory under "Hoists" for the name of your nearest Harrington distributor or write us for literature.

HARRINGTON PEERLESS HOISTS
THE HARRINGTON CO., 1650 W. Callowhill St., Phila. 30, Pa.
Makers of Hoists Since 1876

▲ For more details circle NED-501 J3 on enclosed inquiry slip ▲

PAINT FENCES, TANKS BUILDINGS 6 TIMES FASTER QUICK EASY WAY

with FencPainteR

Save 90% on labor costs, 50% on materials, with this amazing new painting method. Used by America's largest industrial firms, institutions, parks, playgrounds, etc. Stranded roller applicator covers big areas quickly . . . paints most any surface, minimizes waste, slashes costs. Special trial outfit, includes Industrial size FencPainteR, receptacle, 5 gal. Aluminum enamel, 1 gal. solvent (enough for 2000 sq. ft.) only $57.00 ($5.00 extra for gray, white or black) ($10.00 extra for red or green). An easy ONE DAY job!

MAIL COUPON for 8 page illustrated brochure with full details covering FencPainteR products and their use.

FencePainteR Corporation
2314 W. Van Buren Street Dept. E Chicago 12, Ill.

FencePainteR Corp., 2314 W. Van Buren St., Dept. E, Chicago 12, Ill.
☐ Please rush Free 8 page Brochure
☐ Send Special Trial Offer, complete (Color desired .....) $.....
Name .....
Address .....
City ..... State .....

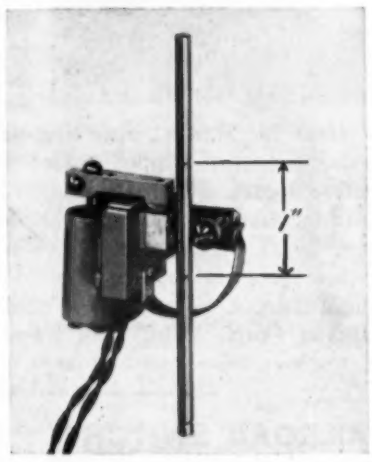
▲ For more details circle NED-502 J3 on enclosed inquiry slip ▲

RECTIFIER TYPE WELDER gives stable easily handled arc

Available in 100 to 600-amp models, this Sureweld welder is of direct current rectifier type. Output current has pronounced ripple which tends to reduce arc blow. Voltage recovery is almost instantaneous when arc is shorted momentarily. Three-phase transformer supplies alternating current power to the full-wave selenium oxide rectifier which provides direct current for welding. Control is by variable rheostat, and fan cooling is employed. Made by **National Cylinder Gas Co.,** 846 N. Michigan Ave., Chciago 11, Ill.

▲ For more details circle NED-503 J3 on enclosed inquiry slip ▲

STRAIN TESTER detects elastic and plastic flows



For 1/16 to 3/8-in. diameter specimens, type S-9 Electric Extensometer is available in gage lengths of 0.4 or 0.5 in. for use with the Olsen model 51 Electronic Recorder for detecting strain under both elastic and plastic tension tests. Instrument is snapped onto the specimen, and provides magnifications of 50, 100 and 200 at the turn of a switch. Instrument returns to zero (start) position when used within the elastic limits of the specimen; backlash eliminators are built in. Other similar units are available for gage lengths of 1, 1.4, 2, 8 and 10 in. respectively. All units utilize as the indicating source an activating knife edge which contacts the specimen and moves as stretch occurs. Made by **Tinius Olsen Testing Machine Co.,** 1072 Easton Rd., Willow Grove, Pa.

▲ For more details circle NED-504 J3 on enclosed inquiry slip ▲

Tool Room Lathe

Rivett Lathe & Grinder, Inc.—Model No. 1020 12-in. swing precision toolroom lathe is described and illustrated in 18-page catalog 1020B. Lathe combines features of precision instrument lathe and power of an engine lathe.

▲ For more details circle NED-505 J3 on enclosed inquiry slip ▲

Introducing . . . **NEW** CDF

CONSTANT-TORQUE SPIRAL TUBING Grade 5

Available in lengths up to 14" to take .248" to .250" core, either 28 or 32 threads per 1".

Here is the most recent C-D-F development in kraft paper, spirally wound tubing for coil forms using threaded iron tuning cores. After the tuning core is inserted and finally adjusted, *the same stable torque rating is maintained at all times*—regardless of the number of adjustments. Exact threading (every thread) features 3-point contact with core, preventing binding and permitting positive tuning and re-tuning. There is no break-through of outer surface due to weak spots. Cement leakage through wall of tube to the tuning core is prevented. Constant torque tubing, and standard tubing (every other thread), are custom-fabricated in C-D-F plants to meet a variety of requirements as to shape, torque, etc.

Samples of C-D-F Spiral Tubing will be sent on request, together with Technical Folder ST-53 which describes a number of other grades of Spiral Tubing.

THE NAME TO REMEMBER . . . CDF SPIRAL TUBING

Continental-Diamond Fibre Company
NEWARK 30, DELAWARE

▲ For more details circle NED-506 J3 on enclosed inquiry slip ▲

Greater filtering capacity! •

new

Houdaille "COOLANT CLEANER" . . . for all water and oil mixtures in individual machine tools or small central systems

New Multi-Tube Design Features:

16,000 SQ. INCH FILTERING AREA	Assures complete removal of chips, abrasives, dirt and other solid contaminants. Keeps coolant clean, safe for re-use indefinitely.
SELF-CLEANING FILTER TUBES	Self-cleaning filter tubes, washed free of contaminants during brief backwash interval, require no manual cleaning or maintenance . . . provide maximum filtering efficiency at all times.
ECONOMICAL OPERATION— NO PRECOATING OR FILTER AIDS	Practical design provides dependable trouble-free operation . . . eliminates need for precoating, filter aids, or expendable filtering media.

Compact, multiple filter-tube unit increases production, reduces downtime, extends tool and wheel life, allows better product finishes with fewer rejects. For complete details write . . .

WORLD LEADING OIL FILTER MANUFACTURER

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"This Bulletin May Hold the Answer to YOUR CONVEYING PROBLEMS"

MATHEWS CONVEYER
Engineering Offices or Sales Agencies in Principal American and Canadian Cities
General Offices, Mathews Conveyer Company . . . . . Ellwood City, Pennsylvania
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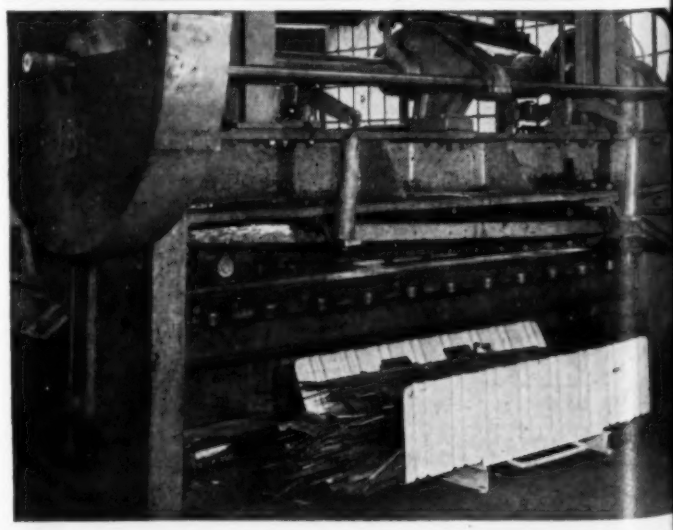
Canadian Division, Mathews Conveyer Company, Ltd. . . . . Port Colborne, Ontario

▲ For more details circle NED-[illegible] on enclosed inquiry slip ▲



COLLECTING — *Notice how the Work-O-Matic Multi-Duty Tray back extends to shelter-shelter falling pieces. Vertical front compacts to a full load.*

◀ Spot-control DUMPING

Safe TIERING ▶

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...acity! • Lower operating cost!

HONAN-CRANE CORPORATION
405 Wabash Ave., Lebanon, Indiana
a subsidiary of HOUDAILLE-HERSHEY CORP.

...ORLD'S ...DING OIL ...ER MANUFACTURER

...e NED-...3 on enclosed inquiry slip ▲

...e Answer ...BLEMS"

...HEW ...VEYERS
...American ...Canadian Cities
...Ellwood ...Pennsylvania
...Coast . San ...ra, California
... Pe...pe, Ontario

● We could say . . . "Hot off the press! Come and get it." But, that's no way to present the solution to a conveying problem. We do say, however, that this bulletin, presenting the newest in Mathews General Purpose Belt Conveyers, could be just what you're looking for. It might help you solve a particular conveying problem. Write for it today.

...rcle NED-...3 on enclosed inquiry slip ▲

Work • O • Matic*
MULTI-DUTY TRAYS

Collect, transfer, store, position and/or dump lengthy parts

A VERSATILE new unit developed especially to handle troublesome shear trimmings, tube and bar cutoffs, blanking skeletons and other hard-to-handle pieces. Designed to be lifted, transferred, tiered, and mechanically dumped with a fork truck . . . at any height from about ground level to full fork lift. Also ideal for work positioning.

Send for complete details. Ask for Catalog No. 83 on the Work-O-Matic Tray and the other cost-cutting Work-O-Matic units that make up the *Work-O-Matic System* . . . the new material handling system being adopted widely by cost-conscious manufacturers and warehousemen. Address The Union Metal Manufacturing Co., Canton 5, Ohio.

*Patent No. 2,445,038. Other patents pending.

UNION METAL
Material Handling Equipment

...ircle NED-...3 on enclosed inquiry slip ▲

ELECTRONIC RECORDER
two different types offered

Both potentiometer pyrometer and resistance thermometer bridge types of electronic recorders are equipped with a 12-in. circular chart and a pointer which is visible at 50 ft. For recording temperature a number of ranges from −100 to 3000° F are optional. Instrument is also suitable for recording humidity, solution conductivity, speed, pH, power, strain or other measurements that can be converted to a change in resistance or direct current millivoltage. Accuracy is to within 0.25-per cent of full scale and sensitivity is about 0.05-per cent of full scale span. Made by **Thermo Electric Co.,** Raphael St., Fair Lawn, N. J.

▲ For more details circle **NED-510 J3** on enclosed inquiry slip ▲

PORTABLE VACUUM CLEANER
for wet or dry industrial service

Equipped with universal 115-v sealed motor, model P-909 heavy duty portable vacuum cleaner generates air flow of 74 cfm and water lift of 42 in. Dry tank capacity is 1¾ pecks and liquid capacity 3¾ gallons. Four rubber-tired swivel bearing casters afford mobility. Standard cleaning tools are 8-ft hose with adapter, steel floor rod, floor and rug nozzle, bare floor and wall brush, crevice tool, utility and upholstery nozzle and slide-on brush. Also offered is kit of tools for conversion of machine to wet-pickup service. Made by **Premier Co.,** 754 Woodlawn Ave., St. Paul 1, Minn.

▲ For more details circle **NED-511 J3** on enclosed inquiry slip ▲

Handbook of Pipefitting

Written to provide a quick solution to problems met in shop or field in connection with pipe bending, mitering, layout, threading, etc., this 282-page 4 x 7-in. "Pipefitters Handbook" is bound in flexible fabrikoid. It has 67 pages devoted to figures for setback and length of band, 9 pages for offset bends, 21 pages on mitered joints, 8 pages of pipe data, 17 pages on screwed fittings, 14 pages on butt welding fittings, 50 pages on flanged fittings and 7 pages on valves. Handbook is available for $6.00 from The Industrial Press, 148 Lafayette St., New York 13, N. Y.

▲ For more details circle **NED-512 J3** on enclosed inquiry slip ▲

READ THIS AND REAP

Dollars Worth of Savings Every Time You Cut A Keyway

With **du Mont** *Minute Man*®
Keyway Broach Kits you can cut any standard size keyway from 1/16" to 1", in any bore from ¼" to 3", in any gear, milling cutter, pulley hub, collar or coupling
in one minute for one cent each

SAVE TIME
SAVE MONEY
CLIP THE COUPON

The du MONT CORPORATION, Greenfield, Mass.
Mail me free Catalog and Price List D on Minute Man Keyway Broaches and Kits.
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Company .....
Address .....

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WIRE MESH

Maybe it all *does* look pretty much the same at first glance. But when a firm has been making wire mesh for 70 years man and boy, there's bound to be a little more to it than meets the eye — a little more know-how in engineering and weaving, a little more quality in the product, a little more service and satisfaction for the user.

JELLIFF WIRE MESH is woven in all ductile metals
JELLIFF WIRE MESH is woven in all commercial weaves
JELLIFF WIRE MESH is woven in widths up to 72 inches
JELLIFF WIRE MESH is economical. Every foot runs true to the specifications.

★ ★ ★ ★

JELLIFF WIRE MESH is a quality product and has been for 70 years. You can depend on it.

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THE C. O. JELLIFF MFG. CORP.
DIPPING BASKETS · LEKTROMESH · RESISTANCE WIRE · WIRE MESH PARTS · WIRE CLOTH · STRAINERS • FILTERS
SOUTHPORT CONNECTICUT
WIRE PRODUCTS Jelliff SINCE 1860

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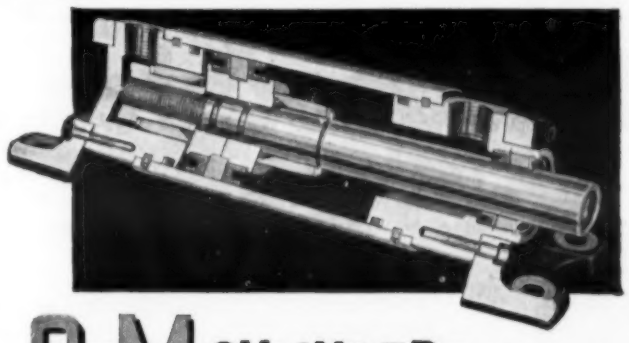

O-M CYLINDERS (air hydraulic)

are EASIER to install and service in any application

Free from projecting tie rods and end caps, O-M Cylinders slip easily into deep recesses in machine bases. Of All-Steel construction (no castings), they can be turned down to fit in close quarters.

They are easily disassembled without wrenches due to internal-locking key. There are no gaskets to replace when re-assembled.

O-M Cylinders "Fit Where Others Won't". They have the lowest cofficient of friction of any cylinder. All end plugs are tapped for universal mounting. The complete range of mounting brackets are interchangeable bore for bore.

Available in a complete range of sizes (1½" to 8" bores), with standard, 2 to 1 and oversize drive rods. Completely interchangeable parts. FREE Catalog and free set of ½ and ¼-scale templates show all cylinders and mounting brackets.

14-day delivery on most sizes

FREE CATALOG and Templates
ORTMAN-MILLER MACHINE CO.
1222 150th Street, Hammond, Indiana

▲ For more details circle **NED-515 J3** on enclosed inquiry slip ▲

RUGGED, DEPENDABLE, ACCURATE GAUGES *For Every Purpose*

If you have requirements for pressure, temperature, flow, level or electrical measuring instruments, for the products you make or for manufacturing operations, it will pay you to consult with U.S. Gauge, the world's largest manufacturer of accurate instruments.

Write today and tell us about your requirements.

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Name _____ Title _____
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LESS DOWN TIME, MORE PRODUCTION FROM PUNCH PRESSES FED BY

LITTELL DOUBLE AUTOMATIC CENTERING REELS

Vital minutes are saved, with practically no down time for coil replacement, when a Littell Double Reel uncoils stock to the punch press. The idle side of the reel is loaded while the other side pays out. When a coil is used up, the operator simply lifts the hub lock pin, then swivels the reel 180°, thus placing the reserve coil in press feeding position. The change-over is complete in a few seconds. Like Littell Single Reels, Littell Double Reels combine balance that means smooth running accuracy with rugged malleable iron and steel construction that assures year in, year out dependability.

FOUR SIZES
No. 3 . . . . . for coils up to 300 lbs.
No. 5* . . . . for coils up to 600 lbs.
No. 10* . . . for coils up to 1,000 lbs.
No. 25* . . . for coils up to 2,500 lbs.
*Can be furnished with motor drive.

Write for catalog

F. J. LITTELL MACHINE CO. Speed with Safety
ROLL FEEDS • DIAL FEEDS
STRAIGHTENING MACHINES
REELS • AIR BLAST VALVES
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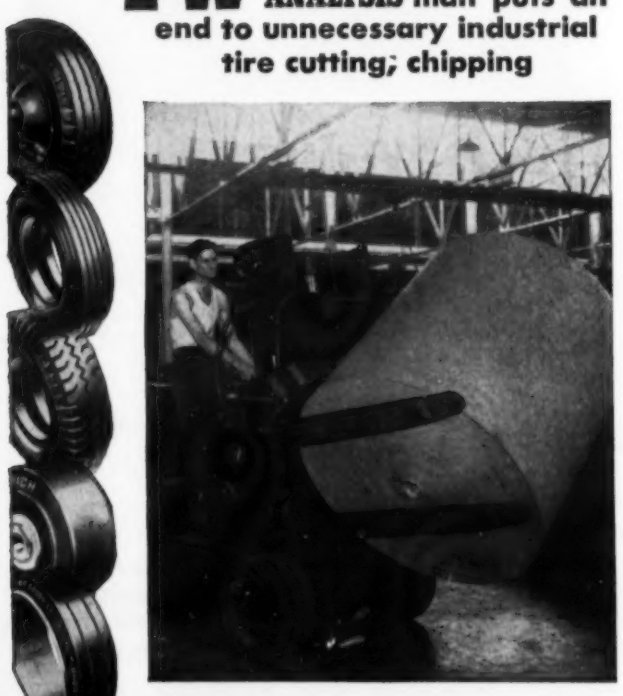
4169 N. RAVENSWOOD AVE., CHICAGO 13, ILL.

For more details circle NED-517 J3 on enclosed inquiry slip

B.F.Goodrich

TWAF TIRE AND WHEEL ANALYSIS man puts an end to unnecessary industrial tire cutting; chipping



Save as much as 50% on tire costs

Debris-strewn floors, sharp projections along trucking aisles or on the trucks themselves, overloading and collisions all can cut and chip an industrial tire. Or tire failure may be caused by the tire being used on a job for which it was never designed.

The B. F. Goodrich Tire and Wheel Analysis man can put an end to unnecessary tire troubles, can save you up to 50% on industrial tire costs. He knows which tire is right for any given set of operating conditions—solid, semi-pneumatic or pneumatic—which tread design and compound is best to use. Without obligation, he will put his training to work on your problems, recommend the right tires for you to use, give you maintenance tips that can cut costs as much as 20%.

The TW Analysis man's advice is impartial, for B. F. Goodrich makes, and BFG retailers sell, a complete line of industrial tires. Use the tires he recommends and save yourself unnecesasry tire expense. Get increased, maybe even doubled, tire life.

To find out more about this free B. F. Goodrich Tire and Wheel Analysis Plan, send in the coupon or call your BFG retailer. A special TW Analysis Plan is available for manufacturers of industrial handling equipment.

Specify B. F. Goodrich tires when ordering new equipment

The B. F. Goodrich Co.
Department TW-168, Akron 18, Ohio.
Please send me:
☐ *Additional information* on your new Tire and Wheel Analysis Plan
☐ A free copy of your "Industrial Tire Guidebook".
Name _____
Company _____
City _____ Zone ____ State ____

B.F.Goodrich RESEARCH KEEPS FIRST IN RUBBER

For more details circle NED-518 J3 on enclosed inquiry slip

CONTINUOUS WINDER for rolls of web material

Model 20 continuous two-arm winder can be applied to winding rolls of web material on shafts, expanding mandrels or directly on cores. Flying core starts can be made at speeds up to 300 fpm, depending upon material being wound. Once started, winding can continue at any speed suitable for the process. Model 20F requires a standard fixed length shaft on which cores are to be chucked, while model 20 v is adjustable to shafts or cores of different lengths. Six sizes are offered to handle roll lengths in 6-in. increments between 36 and 66 in. and roll diameters up to 32 in. Made by **Black-Clawson Co.**, Dilts Machine Works Div., N. First St., Fulton, N. Y.

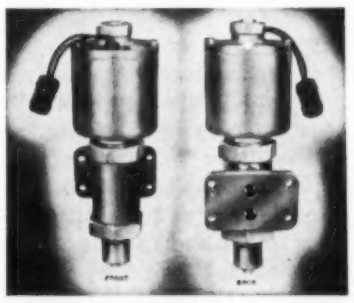
For more details circle NED-519 J3 on enclosed inquiry slip

MILLING HEADS 1-hp model added to line

For heavy-duty applications, model ST mill head is now available with a 1-hp motor which provides a capacity up to ¾-in. end mill for machining steel. Other models are the standard heavy duty and the No. 70 Convertical, which are equipped with ½ and ¼-hp motors respectively. Made by **Rusnok Tool Works**, Dept. N, 4840 W. North Ave., Chicago 39, Ill.

For more details circle NED-520 J3 on enclosed inquiry slip

AIR CONTROL VALVE four-way type is solenoid operated



Providing automatic remote control for all machinery using pneumatic power cylinders, Electro valve operates on any 110, 220 or 440-v dc or 60 cycle power supply and can also be used as a pilot control for master valves. It handles line pressures up to 130 psi, and controls speeds up to 500 strokes a minute. It operates in any position and has ⅜-in. pipe tap connections. Made by **Sciaky Bros., Inc.**, 4517 W. 67th St., Chicago 38, Ill.

For more details circle NED-521 J3 on enclosed inquiry slip

Revolutionary new Baker gas-O-matic fork truck saves money in 3 ways!

40% less fuel...
Tests by independent laboratories and industrial plants show gas consumption of about ½ gallon per hour—less than 60% as much as for conventional gas trucks. Economy results from low operating speed of engine, exclusive Baker variable voltage generator and efficient Baker drive motor.

40% lower maintenance...
No clutch or gear-shift, eliminating most common cause of gas truck breakdowns. Dependable electric drive and many new design features mean 40% lower repair costs and 40% less down time.

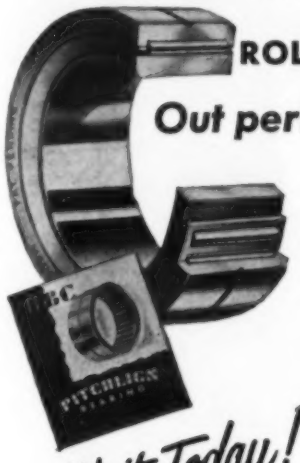
50% longer life...
Majority of GAS-O-MATIC parts are standard Baker electric truck parts. Government permits tax write off of electric trucks over twice as many years as for gas. With one engine replacement, GAS-O-MATIC should last 10 years or more.

Get the whole story from your Baker representative or write for Bulletin 1344

THE BAKER-RAULANG COMPANY
1245 WEST 80th STREET • CLEVELAND 2, OHIO
The Baker-Lull Corp., Subsidiary, Minneapolis, Minn. Material Handling and Construction Equipment
Baker industrial trucks

For more details circle NED-522 J3 on enclosed inquiry slip

Performance is the Payoff! ...and PITCHLIGN Trade Mark



ROLLER BEARINGS Out perform all others

PITCHLIGN'S performance potential leads that of all other comparable bearings. And for good reasons: (1) Roller alignment is applied at the extreme length where only a minimum of force is required to prevent skewing. (2) Roller alignment is controlled by a full-length, free-floating cage acting at the pitch circle. (3) Integral flanges of the heavy outer race guide and support the cage.

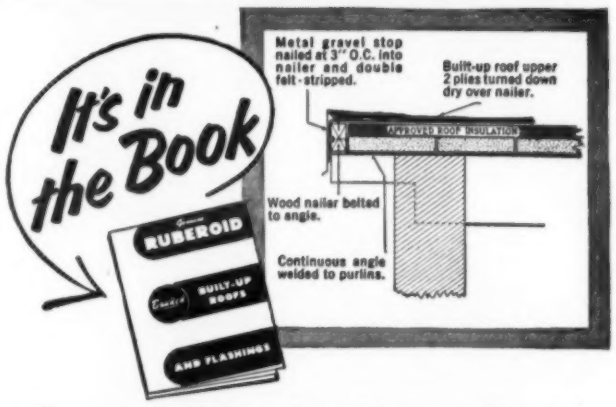
Write Today!

Ask for Bulletin SF-966

RBC
ROLLER BEARING COMPANY OF AMERICA
SULLIVAN WAY • WEST TRENTON, N.J.

For more details circle NED-523 J3 on enclosed inquiry slip

It's in the Book



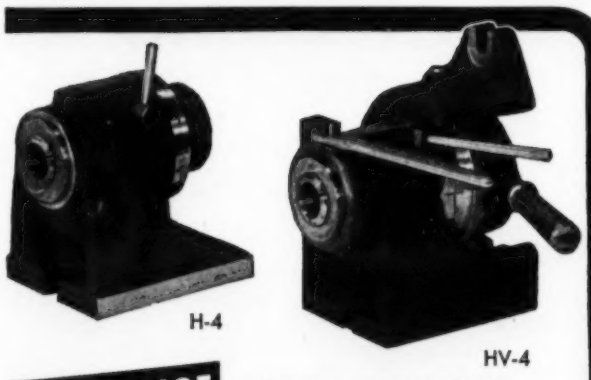
The answer to all your roofing maintenance problems is in Ruberoid's Built-Up Roofing Specification Book. There's a complete specification with detail drawings, like the one above, to meet every condition—Smooth Surfaced Asbestos, Coal Tar Pitch or Special Bitumen with gravel or slag surfacing, and smooth or gravel-and-slag surfaced asphalt.

Because Ruberoid makes *every type* of built-up roof, Ruberoid roofers are not prejudiced in favor of any one type. Because Ruberoid has been a leader in the field for 60 years, you can depend on the right materials and the right specification through Ruberoid Approved Roofers.

Give your roof a thorough check-up now, *and write for Ruberoid's free Built-Up Roofing Specification Book. The Ruberoid Co., 500 Fifth Avenue, New York 36, N. Y.*

The RUBEROID Co.
ASPHALT AND ASBESTOS BUILDING MATERIALS

For more details circle NED-524 J3 on enclosed inquiry slip



HARDINGE ELMIRA, N.Y. INDEX FIXTURES

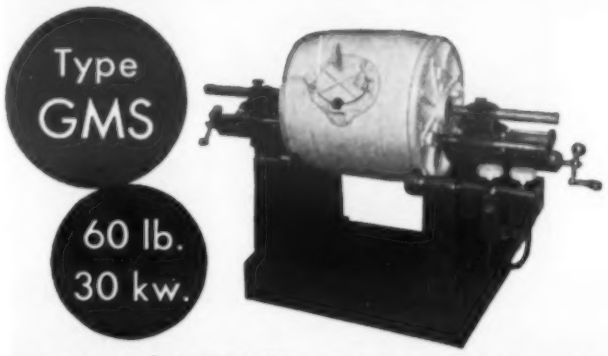
The way to increased production is to hold work accurately and provide for rapid indexing. HARDINGE Collet Index Fixtures—H-4 for Tool Room and Inspection Departments; HV-4 for Production Departments—will help increase production on either new or old machines. Planned interchangeability for a variety of applications. Buy these standard fixtures instead of making expensive special fixtures.

HARDINGE COLLETS
For All Lathes and Automatics
Backed by 60 Years of Manufacturing Experience

HARDINGE BROTHERS, INC., ELMIRA, N. Y.

For more details circle NED-525 J3 on enclosed inquiry slip

All the refinements of its big brothers!



DETROIT ROCKING ELECTRIC FURNACE

This compact, efficient 60-lb. furnace has all the features of the famous, large capacity Detroit Electric Furnaces that melt metal for world famous products. Type GMS produces uniform, high quality melts with efficient and economical use of power. It's excellent for limited production, and for experimental and educational use. New rocking controller, 3-phase motor and independently-mounted electrode brackets are new features . . . Sold complete with transformer. Write for information.

DETROIT ELECTRIC FURNACE DIVISION
KUHLMAN ELECTRIC COMPANY
1060 26th St. • BAY CITY, MICHIGAN

Foreign Representatives: In BRAZIL—Equipamentos Industrias, "Elsa" Ltd., Sao Paulo; CHILE, ARGENTINA, PERU and VENEZUELA: M. Castellvi Inc., 150 Broadway, New York 7, N. Y.; MEXICO: Cia Proveedora de Industrias, Atenas 32-13, Apartado 27A3, Mexico 6, D. F., Mexico; EUROPE, ENGLAND: Birlec, Ltd., Birmingham.

▲ For more details circle **NED-526 J3** on enclosed inquiry slip ▲

Handiest selector ever!

Simplifies your job; saves time, speeds choice of right fastener. Easy to read, easy to use, handsomely lithographed in red, white and blue. Shows various tubular and split rivets, part catalog number, normal clinch allowance, size of clearance hole in work and other details to aid your product manufacturing. Sturdily riveted together for lasting use.

Write for yours today!

EST. 1919
MILFORD

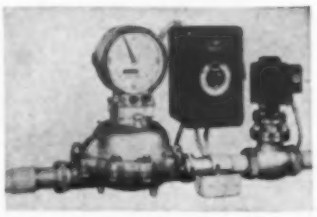
The name to *RIVET* in your memory for fasteners.

THE MILFORD RIVET & MACHINE COMPANY

929 Bridgeport Avenue, Milford, Conn.
878 Illinois Avenue, Aurora, Ill.
1158 W. River Street, Elyria, Ohio
78 Platt Street, Hatboro, Penn.
753 So. Palm Avenue, Alhambra, Calif.

▲ For more details circle **NED-527 J3** on enclosed inquiry slip ▲

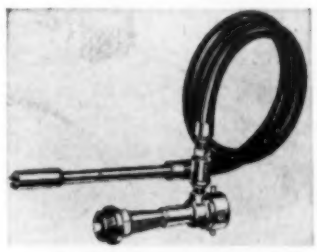
METERING SYSTEM
designed for particular liquids



Niagara Electrivolume metering system is designed for the particular liquid base with which it is to be used. An electric impulse is generated in a power circuit upon delivery of each unit of liquid. Impulses are transmitted to a counter which accumulates a predetermined and preset number. At this point a solenoid valve in the liquid line closes and the counter recycles itself back to zero. Alternate use of the meter is to actuate an electrically-driven integrator located at a distance from the meter. Made by **Buffalo Meter Co.**, 2941-P Main St., Buffalo 14, N. Y.

▲ For more details circle **NED-528 J3** on enclosed inquiry slip ▲

HOSE LINE MIXER
proportions foam and wetting liquids



For use with Rockwood fog nozzles and fire extinguishing foams, this eductor automatically proportions foams and wetting agents to give the most effective mixture. Four models are available for use with 1½ and 2½-in. nozzles and regular and double strength foam liquids. It will pick up the correct quantity of foam liquid over an operating pressure range from 75 to 175 psi at its inlet, ideal operating pressure being 150 psi. Unit is UL approved. Made by **Rockwood Sprinkler Co.**, 44 Harlow St., Worcester 5, Mass.

▲ For more details circle **NED-529 J3** on enclosed inquiry slip ▲

CARTRIDGE TYPE SPRAY GUN
nozzle adjusts from mist to stream

Powered by replaceable carbon-dioxide cartridges, model 53 self-contained spray gun features an adjustable, removable nozzle which adapts it to spray anything from paints to insecticides—from a fine mist to a stream. Each cartridge will spray up to a container-full (21 oz) depending on viscosity of fluid used. For industrial applications, spray gun has attachment that adapts it to conventional air lines to spray solutions that will atomize at low pressure (about 120 psi). Head is cast aluminum, container is heavy gage steel and inserts are brass and stainless steel. Made by **Sullivan-Becker Co.**, Dept. 813-NR, Kenosha, Wis.

▲ For more details circle **NED-530 J3** on enclosed inquiry slip ▲

YOU GET **STEADY FLOW** WITH **SPO** AIR VIBRATORS

These low-cost units provide dependable hard-hitting vibration to keep bulk granular or powdered materials moving. SPO vibrators prevent jams in bins, hoppers and chutes . . . assure steady material flow at all times . . . eliminate production bottlenecks.

Long-lasting SPO vibrators incorporate a special corrosion-proof liner for full power starting, high speed operation and low air consumption. A complete range of types and sizes is available to meet all vibration needs.

SERIES 81

1460-SI

Write today for Bulletin 50 for complete details.

SPO INCORPORATED
6475 Grand Division Avenue • Cleveland 25, Ohio

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ANNOUNCEMENT:

Effective August 1, 1953,
American Ventilating Hose Co.
is changing its name to

THE FLEXAUST COMPANY

Manufacturers of

FLEXAUST*, the durable, flexible, spiral-wire reinforced hose for moving air, gases and materials via pressure, suction or gravity.

PORTOVENT*, the economical, portable spiral-wire reinforced ducting with excellent lengthwise compressibility.

BLOFLEX*, a non-reinforced hose for blower applications only.

Write for literature and prices.

THE FLEXAUST COMPANY
DIVISION OF CALLAHAN ZINC-LEAD COMPANY, INC.
100 Park Avenue, New York 17, N. Y.

*Trade-marks

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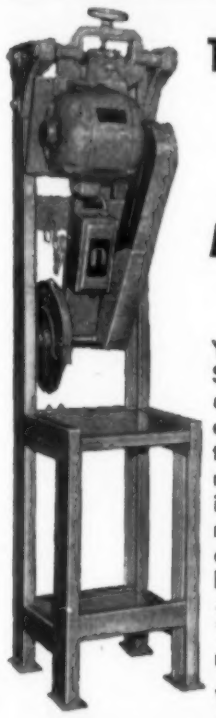

THE *FASTEST* CUT-OFF SAW ON THE MARKET!

Now available in four models

You'll find the new H & A Swing Saw with *automatic air operating unit* the answer to production speed and accuracy. One large industrial firm reported 77 strokes per minute reached in cutting 6 to 12 inch core blocks. Four models are now available to meet every requirement: #55 with 16 or 18 inch blade: #25 with 14 inch blade; #15 with 12 inch blade; #5 with 10 inch blade, bench or floor model.

WRITE TODAY! Send for free circulars, name of nearest dealer.

HESTON & ANDERSON
Division of St. Paul Foundry & Mfg. Co.
18-6F FAIRFIELD, IOWA

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You get ALL these features when you buy PET DRILLS!

If you want the best, take an extra look at the PET Superduty Drill above! Here's a continuous-duty drill—built to *work* right and *handle* right. And, the price is right, too! All features shown are *standard* in PET Superduty Drills—at a *standard drill price!* Complete line of 54 ¼", ⅜" and ½" models give you wide selection—in pistol or saw-type grip. Use coupon below to get complete facts!

PORTABLE ELECTRIC TOOLS, INC., 320 W. 83rd St., Dept. ND-93, Chicago
In Canada: Portable Electric Tools, Ltd., 452 Birchmount Rd., Toronto

MAIL COUPON FOR FREE BULLETIN

Please send me free PET Superduty Catalog and name of nearest distributor.

Name_____ Title_____
Company_____
Address_____
City_____ State_____

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Sperry

Hydraulic
REMOTE CONTROLS

FOR AUTOMOTIVE, RAILROAD, MARINE, MACHINE TOOL and COUNTLESS OTHER APPLICATIONS

For example--

CONTROLLING BRAKES, RATCHETS

The receiver shaft is easily fitted with a properly designed cam to control a wide variety of brakes, releases, ratchets and many other similar devices.

• INSTANT RESPONSE • SINGLE TUBE—EASY INSTALLATION • POSITIVE, ACCURATE DUPLICATION of MOVEMENT • COMPLETELY SELF-CONTAINED, INDEPENDENT • RUGGED and DEPENDABLE

WRITE NOW FOR COMPLETE INFORMATION or send prints and specs for special applications.

SPERRY PRODUCTS, INC.
1109 SHELTER ROCK ROAD,
Danbury, Connecticut
REPRESENTATIVES IN PRINCIPAL CITIES

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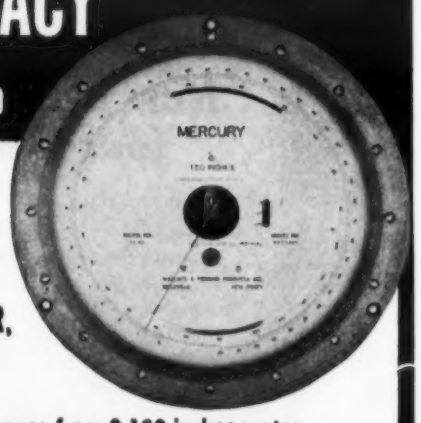
PRESSURE Measurement ACCURACY 0.1%



W&T PRECISION DIAL MANOMETER, FA-145

Ranges: All ranges from 0-120 inches water through 0-250 inches Hg. in two revolutions—45 inch scale.

Write today for Publication No. TP-30-A A-96

WALLACE & TIERNAN
ELECTRICAL MECHANISMS AND PRECISION INSTRUMENTS
Belleville 9, New Jersey . . . Represented in Principal Cities
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Goes Further.... Seals Better....

PLS*

"John Crane" *Plastic Lead Seal is the most economical all-purpose sealing compound for pipe joints, studs and gaskets—*because you use less to get a better seal.* PLS seals for the life of the connection, yet never hardens, allowing joints to be easily broken after years of service.

PLS prevents galling . . . is insoluble in water, gas, steam, many chemicals and all petroleum products. Use it for all services . . . low or high pressure applications up to 6000 psi. . . . temperatures to 500°F. Carries the Underwriters' seal of approval.

Prove to yourself that it takes less PLS to give a perfect seal. Send for a generous free sample. Crane Packing Company, 1811 Cuyler Avenue, Chicago 13, Illinois.

JOHN CRANE CRANE PACKING COMPANY

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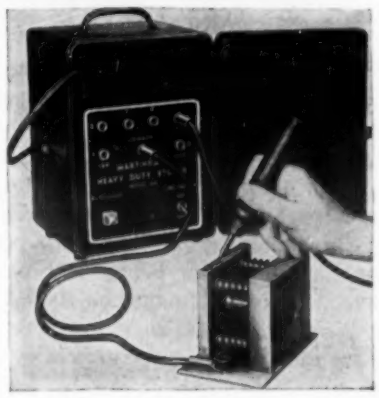
ROLLER CONVEYOR
corrosion-resistant, nylon bearing

Having nylon bearings operating on stainless steel axles, this Nylo-Roll conveyor is impervious to dampness, alkalies, salt brine and mild acids. It has been field tested in creameries, dairies, canneries, meat and food processing and metal pickling plants. Unit is offered in standard 11½, 15, 18, and 24-in. widths with 2-in. diameter zinc-grip coated steel rolls in either live or gravity roller models. Standard for live rollers is 110-v single phase 60 cycle or 220-440 v 60 cycle three-phase gearhead motor. Made by **Metzger Co.**, 416 Douglas St. N. W., Grand Rapids 4, Mich.

▲ For more details circle NED-538 J3 on enclosed inquiry slip ▲

ELECTRIC ETCHER
heavy-duty model has six heats



For heavy-duty marking operations, model A-A electric etcher has six heats rated 180, 310, 425, 550, 800 and 1375 w. These are taken from taps on the secondary winding, so that the full primary winding is always in the circuit, and unit can be left connected when not in use without danger of overheating. Tool is suited to production use, and is equipped with plug-in electrode and ground leads, together with a pilot light and "on-off" switch. Case is of heavy gage metal, and has hinged lid and storage compartment housing cables and accessories. Made by **Martindale Electric Co.**, 1387 Hird Ave., Cleveland 7, O.

▲ For more details circle NED-539 J3 on enclosed inquiry slip ▲

Sand Casting

Wire-bound, and compiled with 46 pages, the "Magnesium Alloy Sand Castings Handbook" is what the name implies—a primer on the subject. Sections are devoted to the alloys and their properties, machining fundamentals and operations, surface finishing, product design and company facilities. Many tables and line drawings are used. Available upon letterhead request from Hills-McCanna Co., 3025 N. Western Ave., Chicago 18, Ill.

▲ For more details circle NED-540 J3 on enclosed inquiry slip ▲

STRESS RELIEVED

...for longer service

One good way to build longer life into your products is to design with Hackney *stress relieved* pressure tanks and ASME vessels, especially where vibration will be encountered.

All fabricating and welding stresses are fully relieved in automatic heat treating furnaces, under accurately controlled time and temperature conditions.

Stress relieved Hackney deep drawn pressure vessels save weight, too, provide greater strength, and better design. Write today for full information.

Hackney MILWAUKEE **PRESSED STEEL TANK COMPANY**
Manufacturer of Hackney Products

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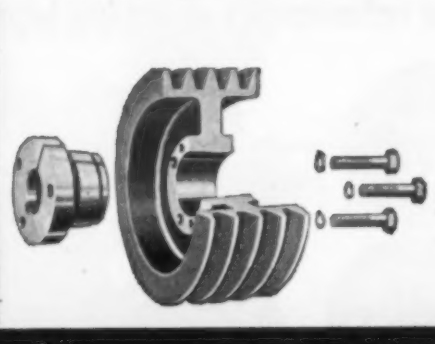
1324 Vanderbilt Concourse Bldg., New York 17
255 Hanna Bldg., Cleveland 15
936 W. Peachtree St., N.W., Room 136, Atlanta 3
208 S. LaSalle St., Room 779, Chicago 4
578 Roosevelt Bldg., Los Angeles 17
18 W. 43rd St., Room 30, Kansas City 11, Mo.

▲ For more details circle NED-541 J3 on enclosed inquiry slip ▲



more sheaves used with this HUB CONSTRUCTION than any other type

More and more manufacturers are using this hub and rim combination. They know that taking off or putting on ordinary sheaves takes a lot of time and trouble, resulting in unnecessary machine down-time.

Wood's "Sure-Grip" Sheaves with interchangeable, one-piece tapered hubs (split from end to end) permit you to change the hub quickly and easily to fit shaft size, or to change the sheave to provide different speed. Dimensions are standardized for interchangeability, in A, B, C, D and E groove sections. Write for our descriptive catalog 192 and consult your Wood's Industrial Distributor.

T. B. Wood's SONS COMPANY
CHAMBERSBURG, PA.
Mechanical Power Transmission Manufacturers—Since 1857.

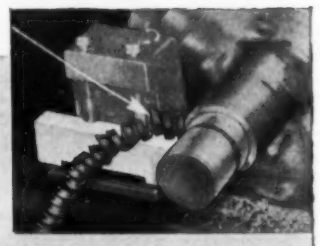
CAMBRIDGE, MASS. • NEWARK, N. J. • DALLAS, TEXAS • CLEVELAND, O.

▲ For more details circle NED-542 J3 on enclosed inquiry slip ▲

1. Taking a section from an OK bedway

2. Making it into a "tool bit"

3. Then cutting metal with it (1045 cold rolled steel)



The Gisholt Machine Co., Madison, Wisconsin, who use Ohio Knife bedways exclusively on their ram and saddle type Turret Lathes, made the above dramatic test for one of their customers. RESULT—another sale of a famous Gisholt Turret Lathe.

This super uniform hardness on the wear surfaces to a depth of 3/16" (64-66 Rockwell "C") is the reason why more and more OK ways, gibs, races, etc., are being specified on new equipment and used as replacements where former parts have failed. OK ways are practically wear proof assuring constant accuracy throughout the life of your machine. Enjoy with many prominent machine tool builders and users, the long wearing, supreme accuracy, super hardness of OK ways. Many sizes, shapes, etc., available, or made to your specifications.

OK wear strips are now available in welded Ampco bronze.

(Reg. U. S. Pat. Office by Ampco Metal Inc.)

Manufacturers for the Metal Working Industry of:

SLITTER KNIVES — SHEAR BLADES — ROTARY SHEAR KNIVES
HARDENED SPACERS — HARDENED WAYS — GIBS
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Write for comprehensive Bulletin to Dept. H

THE OHIO KNIFE CO.
CINCINNATI 23, OHIO

▲ For more details circle NED-543 J3 on enclosed inquiry slip ▲

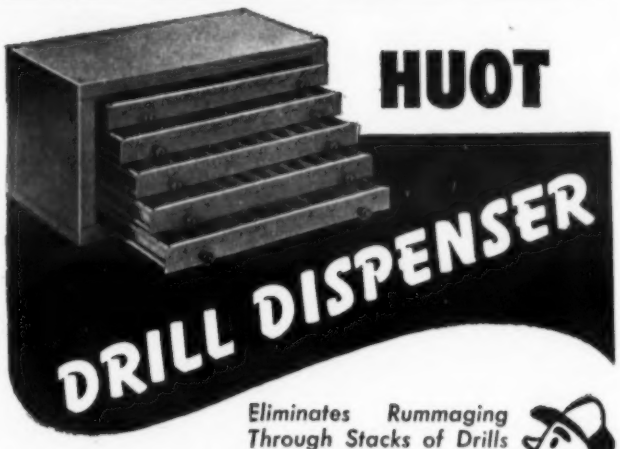
You Can Take the Word of 50,000 Firms

That SPEED SWEEP Floor Brushes Sweep Cleaner, Faster and Outlast Ordinary Brushes

Unique in design and construction, Speed Sweep so far outperforms and outlasts other floor brushes that over half of the nation's top rated firms use Speed Sweep under widely diversified sweeping conditions. We know Speed Sweep can do a better job for you, too. In fact, we guarantee it. We invite a trial order on that basis. Write for complete facts, including styles, sizes and prices today.

MILWAUKEE DUSTLESS BRUSH CO.
530 N. 22 STREET, MILWAUKEE 3, WISCONSIN

For more details circle NED-544 J3 on enclosed inquiry slip



Eliminates Rummaging Through Stacks of Drills

No more running out of drills—your entire stock can be seen at a glance. Each size of drill has its own compartment with rounded bottom for easy selection. You can store dozens of small drills and several large ones in their own compartments. Built-in pricing or inventory system eliminates the need for cost sheets, and will keep a record of drills on hand. Stack two or three cabinets to save space. *Specifications:* 14½" long, 7¼" high, 7¼" deep. Hammerlin baked enamel finish over rugged steel.

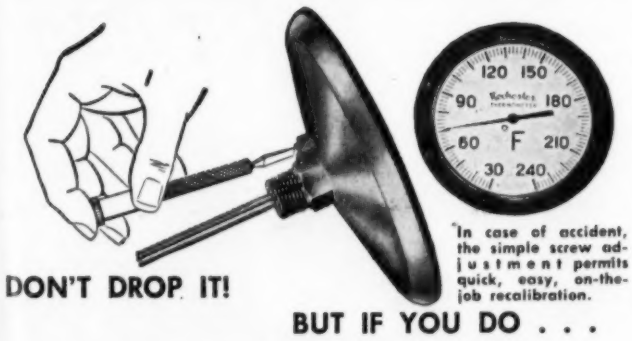
Made in three models for fractional, number or letter drills.

Write for Circular

By the makers of **HUOT DRILL INDEX**

HUOT MANUFACTURING CO.
HUOT is Pronounced "HEW-OT"
571 No. Wheeler St., St. Paul W4, Minn.

For more details circle NED-545 J3 on enclosed inquiry slip



In case of accident, the simple screw adjustment permits quick, easy, on-the-job recalibration.

DON'T DROP IT!

BUT IF YOU DO . . .

ROCHESTER DIAL THERMOMETERS are built to take severe blows without damage to their sensitive movements. But when hit hard enough to knock them out of adjustment, all you need is a screwdriver to put them right back on the job—as accurate as ever. This unique Rochester recalibration feature eliminates the danger of costly production errors due to inaccurate readings.

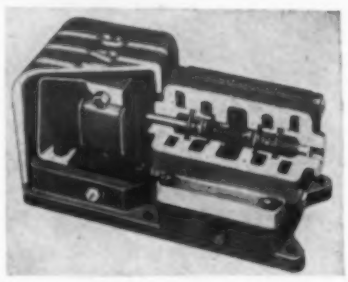
WELDED STAINLESS STEEL construction makes Rochester thermometers more durable, sensitive, pressure tight and resistant to corrosion than any before offered. Backed by 35 years of instrument making experience.

ORDER TODAY from your Rochester Representative, or write for further details. Rochester Manufacturing Co., Inc., 114 Rockwood Street, Rochester 10, N. Y.

Rochester
MANUFACTURING COMPANY, INC.
DIAL THERMOMETERS · GAUGES · AMMETERS

For more details circle NED-546 J3 on enclosed inquiry slip

SOLENOID AIR VALVE
has straight-through flow



Design of improved solenoid operated air valve incorporates an aluminum alloy, surface hardened spool on which the sealing material is integrally molded and bonded. Seals enter the bearingized bores of body and retainers to effect a "sealed with air pressure" seal. Featherlight contact of seal contributes to long life. Mechanical and electrical construction is simple and accessible. Valves have full pipe orifice area with maximum straight-through flow. Made by **Mechanical Air Controls, Inc.,** 15313 W. Eleven Mile Rd., Detroit 37, Mich.

For more details circle NED-547 J3 on enclosed inquiry slip

INDUSTRIAL HEATER
compact, gives 60,000 Btu hourly

Portable and compact, model E-600 industrial heater produces 60,000 Btu output per hour, weighs 114 lb including fuel for five hours service, and can be easily carried by two men. Completely self-contained, it has a centrifugal pressure-type dual blower separating combustion air from ventilating air, and can be operated from 110-v ac or 24-v dc, containing its own rectifier. It burns fuel oil or gasoline, and will function at temperatures as low as −70° F. A glow-plug gives positive ignition, and an operating switch provides manual high-low operation. Nonclog fuel metering jet maintains steady flow regardless of temperature changes or fuel viscosity. Made by **Perfection Stove Co.,** 7890-A Platt Ave., Cleveland 4, O.

For more details circle NED-548 J3 on enclosed inquiry slip

High-Vacuum Pumps

F. J. Stokes Machine Co.—36-page illustrated catalog No. 750 is entitled "Stokes Microvac Pumps for High Vacuum." Tables of formulas, constants and conversions frequently used in vacuum processing; solutions to problem of pump selection for typical vacuum systems and maintenance procedures for high-vacuum pumps are presented. Included are typical installations for wide range of operations such as drying, freeze-drying, impregnation, metallizing and extruding.

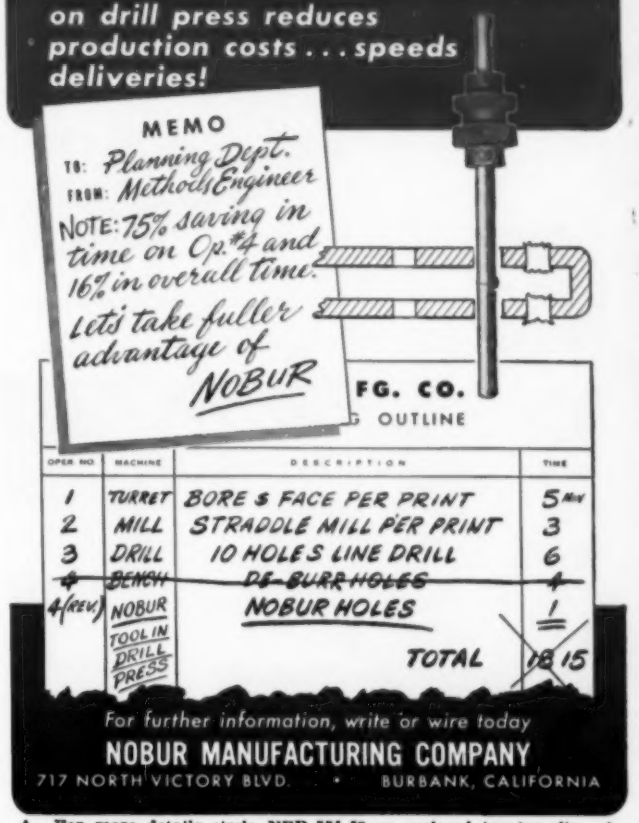
For more details circle NED-549 J3 on enclosed inquiry slip

New Becker Model "53" Spray Gun, specially engineered for industry, sprays protective coatings, paints, solvents, cleaners, oils, etc. *Completely portable!* Powerful CO_2 cartridge (10 for $1.00) sprays up to one 21-ounce containerful. Tank can be charged from air hose (for liquids atomizing at 120 psi), with special attachment. Rugged steel tank, machined brass and stainless inserts, cast aluminum head. See your Distributor or order direct postpaid.

SULLIVAN-BECKER CO. Dept. 173-J KENOSHA, WISC.

For more details circle NED-550 J3 on enclosed inquiry slip

Deburring with NOBUR tool
on drill press reduces production costs . . . speeds deliveries!



For further information, write or wire today
NOBUR MANUFACTURING COMPANY
717 NORTH VICTORY BLVD. • BURBANK, CALIFORNIA

For more details circle NED-551 J3 on enclosed inquiry slip

THERE'S A STURDY
BURKE
FOR EVERY PURPOSE

Thousands of efficient, low cost Burke Bench Millers are proving their superiority in Tool, Development and School Shops and a wide variety of mass production operations.

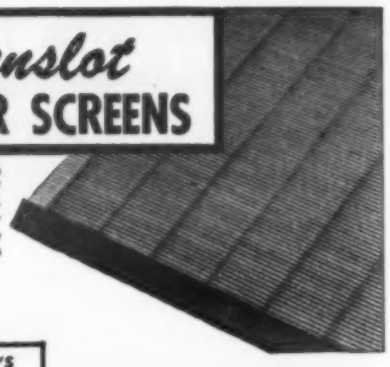
Send for complete data on models attachments, accessories and suggestions for putting Burke's to work for your profit.

THE **U. S.-BURKE** MACHINE TOOL DIV.
Brotherton Road 2, Cincinnati 27, Ohio

For more details circle NED-552 J3 on enclosed inquiry slip

Kleenslot VIBRATOR SCREENS

They can be DESIGNED AND ADAPTED TO FIT ANY MAKE OF VIBRATOR. Perfect separation on wet or dry screening. Accurate performance on hundreds of installations.



HERE'S HOW IT'S DONE

Cross section at left shows how KLEENSLOT Screens operate on a non-clogging principle.

Kleenslot SCREEN GUARDS

The screen guard is built into the screen and the guard bars permit only the finer particles to pass over the screen. All sizes and most materials furnished.

SEND FOR OUR ILLUSTRATED CATALOG

Wedge-Wire CORPORATION
5604 CLARK AVE CLEVELAND 2, OHIO

For more details circle NED-553 J3 on enclosed inquiry slip

AMERICAN MONORAIL
EQUIPS RIGID FRAME BUILDINGS
WITH FLEXIBLE OVERHEAD SERVICE

Don't let crane requirements stymie your consideration of rigid frame buildings. Packaged buildings not only provide definite savings in construction costs and erection time but can be equipped with crane service over the entire area. American MonoRail cranes up to 5-ton capacity are available for entire span or half span operation. If you are planning plant expansion and considering rigid frame type construction, be sure to include American MonoRail cranes. Our engineers will gladly consult with you and show you cost and space saving advantages, in addition to original installation savings. Write us today.

THE AMERICAN MONORAIL COMPANY
13116 Athens Avenue • Cleveland 7, Ohio

For more details circle NED-554 J3 on enclosed inquiry slip

HERE'S THE TOOL that fits to a T

The right angle chucking lathe, tracer controlled, provides for efficient profile machining of workpieces having large diameter, short length, and thin wall sections, particularly those made of stainless steel and heat-resistant alloys.

To complete the set-up, an appropriate cutting tool is required. It must be so shaped as to accurately follow the lead of automatic control, face up to the job, and cut corners with maintained precision.

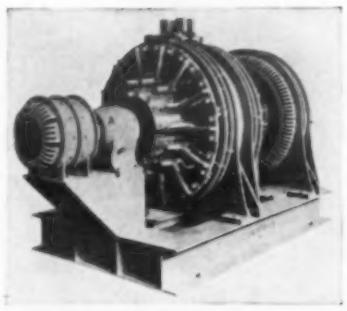
For this very purpose a Kennametal tool has been designed. The mechanically-held triangular insert, seated in a hardened V trough, provides a sturdy design in a 50° nose angle tool that will withstand lateral thrust, and can be modified to smaller nose angles and radii as required by specific profiling conditions.

Four shank sizes are available in three different styles—right-hand, lefthand, and neutral, as illustrated in the sketches. See Catalog 52, page 45 for specifications. Confer with our Tool Engineers if you need help in this type of tooling—or any other. Kennametal Inc., Latrobe, Pa.

KENNAMETAL
CEMENTED CARBIDE TOOLING THAT INCREASES PRODUCTIVITY

For more details circle NED-555 J3 on enclosed inquiry slip

MOTOR-GENERATORS
low-voltage line now redesigned



Featuring improved commutation, welded steel construction, increased accessibility and more open ventilation, redesigned line of low voltage motor-generators includes sizes from 300 to 20,000 amp at specified voltages. Improvements have rendered generator and exciter brushes and coils and commutator fully accessible for inspection, cleaning and removal without the necessity of removing any other components. Brush life has also been considerably increased. Direct-drive motor has either 80 per cent leading or unity power factor and has high starting and pull-out torque. Made by **Chandeysson Electric Co.,** 4064 Bingham Ave., St. Louis 16, Mo.

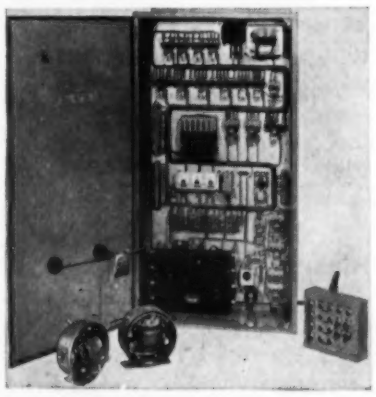
For more details circle NED-556 J3 on enclosed inquiry slip

QUARTZ OPTICAL FLATS
range from 2 to 10-in. diameter

Milled to a surface accuracy of 0.000005-in., line of optical flats ranges from 2 to 10-in. diameter, with thicknesses from 1 to 1½ in. Flats are fabricated from fused quartz because of its low coefficient of expansion and transparency. They are usable as gage tools and standards, and can be made to order for specific jobs if required. Made by **Hanovia Chemical & Mfg. Co.,** Dept. T, 100 Chestnut St., Newark 5, N. J.

For more details circle NED-557 J3 on enclosed inquiry slip

TESTING PANEL
for single phase electric motors

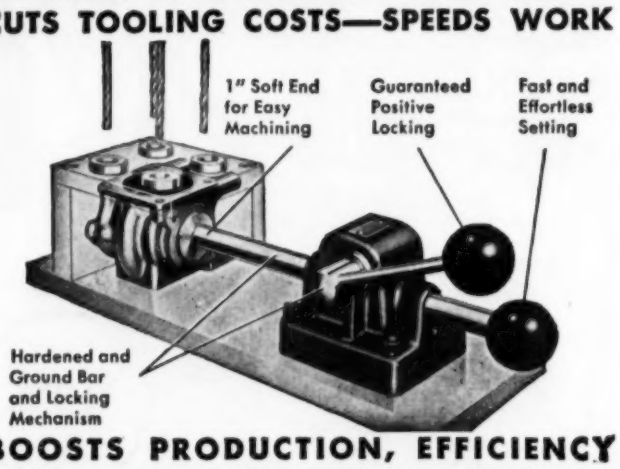


All types of single phase electric motors can be tested by the Gemco automatic testing panel. Capable of testing 1800 motors a day, it requires but the pushing of a single pushbutton to check for continuity of windings, correct terminal connections, high potential, ground and operation. Faulty motors are automatically indicated by an audible alarm signal and red light which show the specific fault. Selector switches enable the panel to test many motor varieties. Made by **Gemco Electric Co.,** 25685 W. Eight Mile Rd., Detroit, Mich.

For more details circle NED-558 J3 on enclosed inquiry slip

HEINRICH "GRIP-MASTER" FIXTURE LOCK

CUTS TOOLING COSTS—SPEEDS WORK



BOOSTS PRODUCTION, EFFICIENCY

Now—at the request of industry—we offer the new "Grip-Master" Screwless Fixture Lock, applicable for fixtures and jigs used in drilling, milling operations, etc. It incorporates the same high-quality locking mechanism proved by industrial use in the famous "Grip-Master" Screwless Drill Press Vise. Pays for itself quickly by increasing production, cutting tooling costs, etc. See your Dealer, or write for details.

heinrich TOOLS INC.

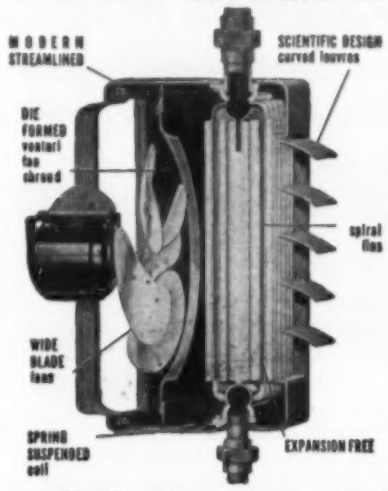
NEW CATALOG FREE
Be sure you have a complete Heinrich Tool Catalog in your files. Your copy will be sent free upon request.

DEPT. 303-J • RACINE, WIS.
DRILL PRESS VISES • FIXTURE LOCKS • NIBBLERS
PUNCHES • ROD CUTTERS

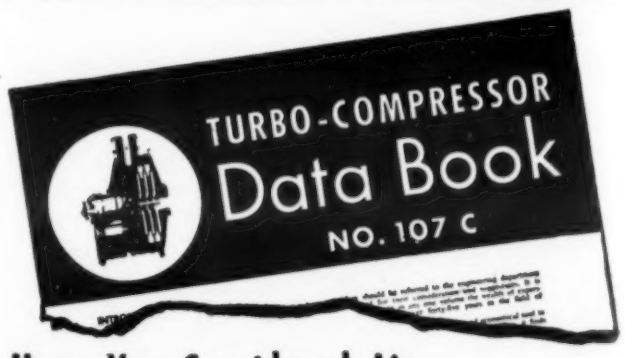
For more details circle NED-559 J3 on enclosed inquiry slip

UNIT HEATER . . sets new standard of quietness and heating efficiency

McCord Unit Heaters are a time proven product embodying design based on years of experience in the heat transfer field. These units are not only rugged in design and guaranteed for use on #150 p.s.i. steam pressure but are made attractive in appearance. Two outstanding features appeal to maintenance engineers — we use standard motors with standard bases which quickly permits the use of replacement motors should a motor fail in service — the heating element is made of individual spiral fin tubes which are free to expand independently without putting a strain on the brazed joints. The entire heating unit is spring suspended and floats free in the casing, eliminating rigid connections. Improved type fan blades deliver large volumes of air with minimum air noise and vibration which makes these units suitable for office and store use. A complete line of vertical projection type unit heaters and blast coils are also available. Catalog on request or write for folder. "Instructions for Maintenance of Unit Heaters." **McCord Corporation,** Detroit, Mich. *(Advt.)*



For more details circle NED-560 J3 on enclosed inquiry slip



Have You Considered Air for the Following Uses?

AIR CURTAINS . . . LIQUID REMOVING
HEAT TREATING . . . SCALE BLOWING
COOLING . . . SPRAYING . . . AGITATION
TESTING . . . DRYING . . . VENTILATING
HEAT TREATING

These and other applications are described in the Spencer Turbo-Compressor Data Book No. 107-C. Yours for the asking.

THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT
SPENCER HARTFORD
466-J

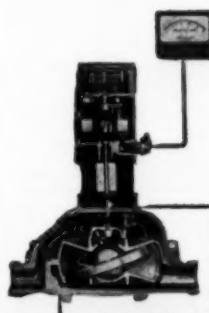
For more details circle NED-561 J3 on enclosed inquiry slip

viscosities unlimited

HAYS VERIFLOW METER AND HAYS ELECTRONIC VERITROL
indicate and control liquid flow

Now virtually all fluids can be precisely measured and controlled—*from a remote position.*

Hays VERIFLOW meter accurately measures, indicates, and totals the flow of corrosive and hard-to-meter liquids without using weigh tanks, orifice plates, or gage sticks. With the Hays VERITROL you simply set a knob at the rate of flow desired . . . then, the VERITROL controls the flow of liquid at that set-rate. *Send for Pub. No. 53-766-38.*



for corrosive liquids
Acetic Acid, Aluminum Potassium Sulphate, Ammonia, Calcium Compounds, Carbolic Acid, Formaldehyde, Fruit and Vegetable Juices, Hydrogen Peroxide, Phosphoric Acid, Potassium Hydroxide, Sodium Compounds, Sulphuric Acid (concentrated), Stearic Acid, and many others.

THE hays CORPORATION
MICHIGAN CITY 15, INDIANA

For more details circle NED-562 J3 on enclosed inquiry slip

Get RAPID-FIRE PRODUCTION from your PUNCH PRESSES

It's Easy with WITTEK Automatic Roll Feeds

Wittek automatic roll feeds fit all makes and sizes of punch presses — provide maximum efficiency and extreme accuracy in the high speed automatic feeding of strip stock. Made in single roll, double roll, and compound types with straighteners, in models to feed (push or pull) in any direction. Length of feed is easily adjusted to meet individual requirements.

4472

WITTEK Reel Stands

Simplify Handling of Coiled Stock

Choice of standard models to facilitate handling coiled stock . . . from small, light coils to those weighing up to 800 pounds. Larger reel stands automatically center the coils — provide frictional braking action to prevent overrunning, maintain uniform coil slack.

Write for full particulars

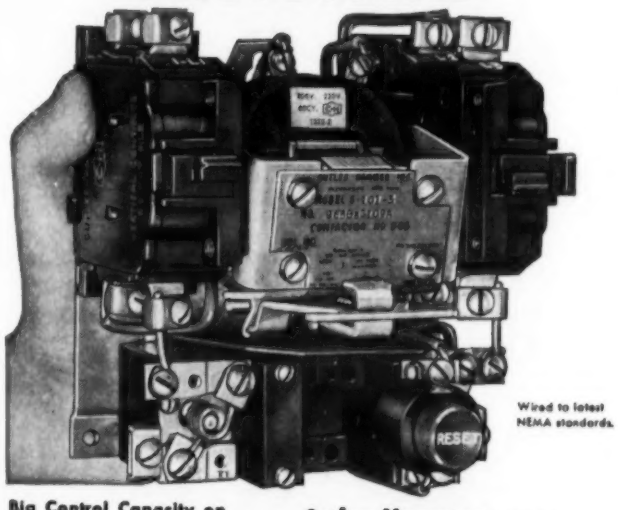
WITTEK Manufacturing Co.

4325 W. 24th Place, Chicago 23, Illinois

Automatic ROLL FEEDS AND REEL STANDS

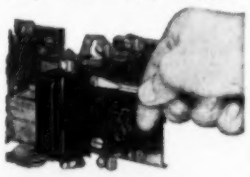
▲ For more details circle NED-563 J3 on enclosed inquiry slip ▲

NEWS FOR MOTOR CONTROL DESIGNERS



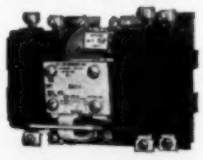
Wired to latest NEMA standards.

Big Control Capacity on Small Panel Area. NEMA Size 1 Compact Starter; 7½ HP. 440 V. Measures only 5.75" x 5.75" x 3.8"



Easiest-to-add Extra Interlocks. Only a screwdriver is needed; contactor or other parts not disturbed.

Three-Coil Overload Protection. Full 3-Phase protection without exaggerated space requirements and expense. 3-Coil relay shown here with 3-position switch and reset button.



Most Adaptable Control Relays. Two to six poles; dust-safe vertical contacts. Contacts can be changed from N.O. to N.C. or vice versa by simply inverting position. Circuit arrangement is always visible.

Cutler-Hammer ☆ ☆ ☆ Components Offer Many Desirable New Features

Electrical engineers everywhere today are quick to praise the spectacular new Cutler-Hammer ☆ ☆ ☆ Motor Control. The three stars stand for three entirely new standards in motor control performance and satisfaction . . . an entirely new standard in ease of installation . . . an entirely new standard in trouble-free performance . . . an entirely new standard in both electrical and mechanical life. These new standards are of great importance to machine design and control circuit engineers. Particularly, because they have been achieved with components of extremely small size designed to permit the closest possible grouping on panels. Panel spacing can be determined almost entirely by electrical considerations . . . extra dead space is not needed for the mechanics of wiring, adjusting, or even disassembling installed components. No other components offer such simple and complete flexibility; easy-to-add electrical interlocks, easy-to-change contact arrangements on control relays, three coil overload relays for full three-phase protection, etc. Write *today* for technical data sheets. CUTLER-HAMMER, Inc., 1377 W. St. Paul Avenue, Milwaukee 1, Wisconsin.

CUTLER-HAMMER MOTOR CONTROL C-H

▲ For more details circle NED-564 J3 on enclosed inquiry slip ▲

PIPE JOINT LAYOUT TOOL

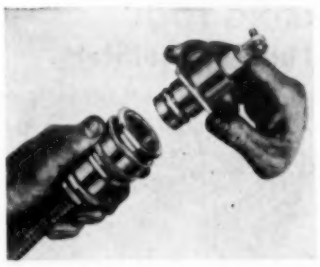
average marking time 5 minutes

Quick, precise laying out of pipe joints is possible with this contour marker, offered in two sizes for pipe ranging from 1½ to 18 in. diameter, and from 16 to 48 in. diameter. Average pipe joint can be marked for cutting in less than 5 minutes. Dial marked in both degrees and pitch is set to the desired angle, then a soapstone point on an articulated arm traces the cutting line around the pipe. Made by **Contour Marker Corp.**, 1841½ E. Compton Blvd., Compton, Calif.

▲ For more details circle NED-565 J3 on enclosed inquirp slip ▲

QUICK DISCONNECT COUPLINGS

for coaxial cable applications



These couplings for coaxial cable applications are the smallest size yet produced by company with quick-disconnect feature. Other advantages include injection molded and machined Teflon insulators and beryllium copper receptacle connections that surpass high voltage potential of 7000 v rms at 60 cycles for one minute. All metal parts are silver plated. Coupling conforms with all government specifications. Made by **Hallett Mfg. Co.**, Dept. C, 1601 W. Florence Ave., Inglewood, Calif.

▲ For more details circle NED-566 J3 on enclosed inquiry slip ▲

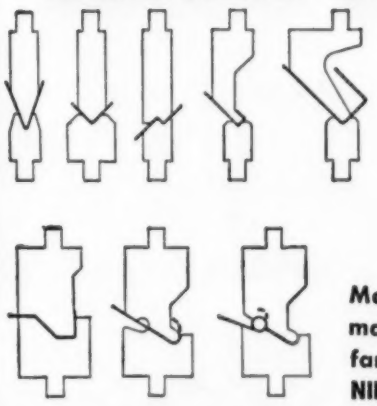
LEVER TYPE ATTENUATORS

offered in 20 or 30-step units

Vertical series 820 and 830 lever type attenuators feature baffle-plate covered front slot to exclude dirt and a two-piece shield to protect resistor strips and cover the switch rotor mechanism and contacts. Because switch rotor is not attached to the lever, it can be moved by remote control without disturbing its equalized positive contact pressure or smooth movement. As many as 11 units can be mounted on standard 5¼ x 19-in. panel. Resistor accuracy is within 5 per cent, and controls have flat frequency response to 30 kilocycles. Made by **Daven Co.**, Dept. LTA, 191 Central Ave., Newark 4, N. J.

▲ For more details circle NED-567 J3 on enclosed inquiry slip ▲

BRAKE DIES



MADE FROM FORGED CHISEL STEEL BILLETS

Made by the makers of the famous SEMCO NIBBLER PRESS

- MANY STILL IN USE EVEN AFTER 10, 20 and even 30 YEARS.
- THEY COST MORE BUT THEY LAST FOR YEARS.

Write for Estimates on Your Work and Ask for Latest Literature

SEMCO SERVICE MACHINE COMPANY INCORPORATED

202 MILLER STREET, ELIZABETH, N. J.

▲ For more details circle NED-568 J3 on enclosed inquiry slip ▲

NEW...LIGHTWEIGHT...NON-CORROSIVE

UDYLITE LAMINEX TANKS

Udylite Laminex tanks of molded fiberglass have many of the advantages of aluminum or stainless steel yet cost less.

In addition to this important low initial cost, Udylite Laminex tanks have these unique features—

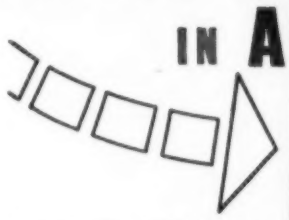
- Non-corrosive inside and out. They're easy to clean, too.
- Electrically non-conductive.
- Extremely lightweight. A 2'x2'x3' tank weighs only 60 lbs!
- If accidentally damaged, can be quickly and easily repaired, in place.
- Capacities are from 25 to over 500 gallons, and depths up to six feet are available.

For full information on prices and sizes, call your Udylite Technical Man or write direct. THE UDYLITE CORPORATION DETROIT 11, MICHIGAN

THE Udylite CORPORATION

▲ For more details circle NED-569 J3 on enclosed inquiry slip ▲

READ ALL ABOUT THE LATEST IN AIR GAGING



JUST OFF THE PRESS, this book contains up-to-the-minute, complete specifications for the Dimensionair. Explains the important advantages of the new balanced air system. Also tells about our new air gage accessories — the Arnold Air Grinding Gage, Air Electric Switch, and Air Gaging Electronic Controls. Here is a fund of the latest authoritative reference data on the Air Gage, developed by Federal during many years' study of actual shop use requirements and engineering research. Ask for your copy today. Federal Products Corp., 1179 Eddy Street, Providence 1, Rhode Island.

FEDERAL

Largest manufacturer of indicating type gages . . . exclusively

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Here is Power at the Speed You Need

Write today for your copy of this NEW 20-page catalog on SHAFT-KING, the NEW Shaft-Mounted Speed Reducer.

It will pay you to get complete information about SHAFT-KING before you buy any speed reducer. It outperforms all others in its size range. It's made by American, the originator of shaft-mounted speed reducers.

The American Pulley Company
4294 Wissahickon Ave., Philadelphia 29, Pa.
Gentlemen:
☐ Please send your new Shaft-King Catalog
☐ Send name of local Shaft-King distributor
☐ We need help on a slow speed drive problem
Name_____
Firm_____
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City_____ Zone___ State_____

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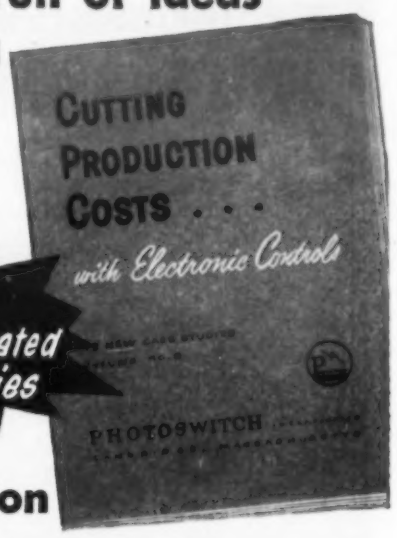
FREE! Full of ideas for saving with Electronic Controls



45 new illustrated case studies

1953 Edition

A completely revised edition of the handbook that has become the "bible" of electronic control for thousands of engineers and production executives.

Newly edited, with 45 new case studies showing how standard packaged electronic controls have solved many industrial problems you're likely to meet. It explains clearly and factually, without hocus-pocus, tested ideas for achieving new efficiency through "Electron-eered" counting, weighing, measuring, timing and cycling.

SEND FOR YOUR COPY NOW!

PHOTOSWITCH INC.
Dept. NA 7, 77 Broadway, Cambridge 42, Mass.

For more details circle NED-572 J3 on enclosed inquiry slip

NOELTING **Faultless** ENGINEERED **TRUCK CASTERS** CUT HANDLING COSTS

NEW!
MEDIUM DUTY INDUSTRIAL CASTER
Cuts Handling Time —Saves Man-Hours

900 Series Double Ball Bearing Swivel Plate Caster with Vulcanized Rubber Tread Wheel

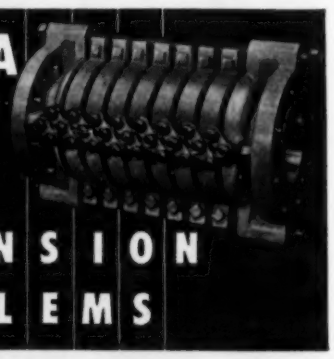
The 900 Series, all purpose, Truck Caster has heavy pressed steel horn and top plate, corrugated for extra strength. Swivels easily on *two* full rows of hardened balls rolling around *two* separate raceways. Choice of six kinds or wheels to suit load (*175 lb. to 550 lb.*) and floor surface conditions.

All the engineering "know-how" from *over half a century of specialized experience* is yours in Faultless Industrial Casters—to speed production lines, trucks, portable equipment . . . with *less time, noise, effort.* Ask for Cat. 156, no obligation.

FAULTLESS CASTER CORPORATION
Dept.NE-11, Evansville 7, Indiana
Branches in Principal Cities—Canada Factory: Stratford, Ont.

For more details circle NED-573 J3 on enclosed inquiry slip

ZALLEA for your EXPANSION PROBLEMS



This Zallea Duo-Equalizing Stainless Steel Expansion Joint is an ideal medium for absorbing expansion and contraction in pipelines due to thermal changes.

These Zallea products find application in intermittent steam service in long lines for both institutions and industrial plants.

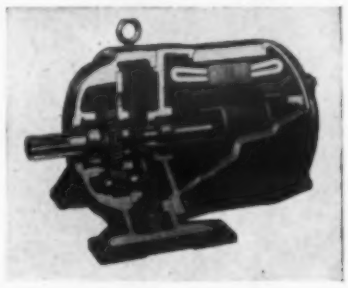
Other Zallea joints are available in either single or double flanged or welded end types in diameters up to thirty feet. Temperatures may vary from sub-zero to 1600° F. and pressures from vacuum to 2000 psi. For further information, write today for bulletin No. 351.

There's no obligation, of course.
Zallea Brothers, 818 Locust Street, Wilmington 99, Delaware.

Zallea

For more details circle NED-574 J3 on enclosed inquiry slip

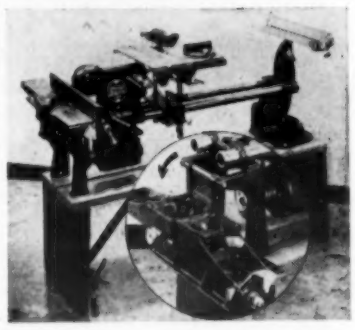
GEARMOTORS in range from 1 to 150 hp



Featuring a wide selection of power units with single, double, or triple speed reduction, gearmotors are available in a range from 1 to 150 hp. Units employ any Crocker-Wheeler motor including squirrel - cage, wound rotor, or multi-speed in open-protected, splashproof, totally-enclosed nonventilated, totally-enclosed fan-cooled and explosionproof enclosures. Mounting can be horizontal, ceiling, sidewall or inclined. Features include positive oil seal between gears and highspeed bearing, large oil reservoir and locked motor shaft pinion to minimize vibration on reversing service. Made by **Elliott Co.,** Crocker-Wheeler Div., Martin St., Jeannette, Pa.

For more details circle NED-575 J3 on enclosed inquiry slip

POWER WOODWORKING TOOL improved model has 4-in. jointer



Improvements incorporated in the Shopsmith multipurpose power woodworking tool include a 4-in. precision jointer with 28-in. table, universal hold-down accessory and hard chrome rustproofing of all tubular ways and table rods. The jointer, not an attachment, is sold separately and becomes an integral part of the tool when installed. It is powered by a short drive belt using a four-step pulley and can be run simultaneously with the table saw. Cast iron fence tilts from minus 45 to plus 45 degrees, with stops in most-used positions. Hold-down is also sold separately and provides "another pair of hands" for safer work with saw, shaper, router, molder, dado blade and other tools. Made by **Magna Engineering Corp.,** Dept. NED, 110 Linfield Dr., Menlo Park, Calif.

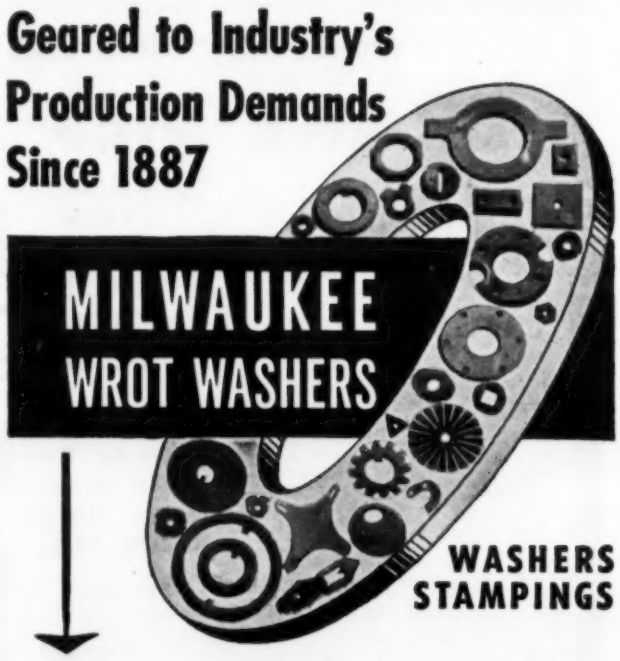
For more details circle NED-576 J3 on enclosed inquiry slip

Melting Tanks

Aeroil Products Co.—12-page illustrated bulletin No. 440 describes a line of processing tanks for plastic compounds, waxes and similar preparations. Units are available in many styles, capacities and temperature ranges, and are of both direct and indirect heating design with both gas and electric firing for different purposes. Two bench units are designed for protective coating such items as tools and small parts.

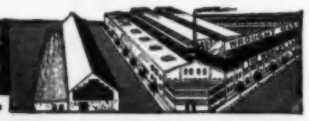
For more details circle NED-577 J3 on enclosed inquiry slip

Geared to Industry's Production Demands Since 1887



Offering the most complete line of washers available today . . . all types and sizes, all materials, all finishes. More than 25,000 sets of dies. Let us quote on your requirements.

WROUGHT WASHER MANUFACTURING CO.
The World's Largest Producer of Washers
2256 S. BAY ST., MILWAUKEE 7, WIS.



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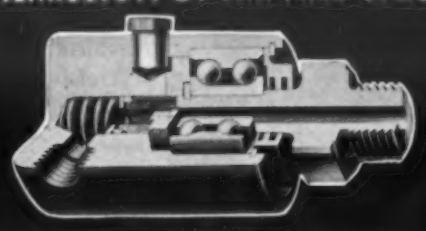
For more details circle NED-578 J3 on enclosed inquiry slip

FAWICK ROTORSEAL
PROVIDES TROUBLE-FREE TRANSMISSION OF AIR AND LIQUIDS



If your machine problem requires the transmission of air or liquids from stationary to rotating machine members, a FAWICK ROTORSEAL will provide the trouble-free, practical answer.

Precision-made ROTORSEALS are available in either single or multiple passage units, producing an absolute sealing of air, liquids, or gases under pressure. They are equally effective in vacuum applications. Thousands of installations have proved the high efficiency of FAWICK ROTORSEALS.

FAWICK AIRFLEX DIVISION
FEDERAL FAWICK CORPORATION
9919 CLINTON ROAD
CLEVELAND 11, OHIO

Write for ROTORSEAL Bulletin ML-6.

FAWICK Airflex
INDUSTRIAL CLUTCHES AND BRAKES

For more details circle NED-579 J3 on enclosed inquiry slip

Typical, is this model train transformer application of Indicating Action. Real "sell action" here with the two Sterling meters providing informative interest and appealing movement.

How about your product — would an electrical or mechanical indicating device improve its eye appeal and buy appeal? Or perhaps you're dreaming of a new toy, gadget or atomic whatsit that needs an indicating instrument. Let's talk about it—perhaps we can help you, now.

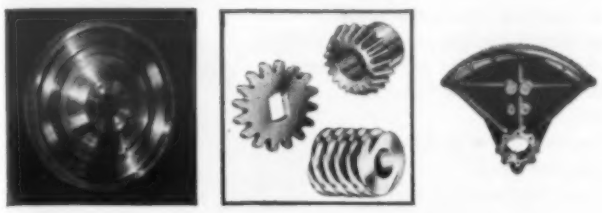
STERLING IDEAS
SEE THEM NOW!

This file folder is chock-full of information on Sterling meter models (A.C. and D.C. Panel, Resistance, Pocket in Ammeters, Voltmeters, etc.) plus examples of specially designed indicating meters for interesting applications. Send for your copy today.

STERLING
MANUFACTURING COMPANY
7201 Wentworth Ave.
CLEVELAND 2, OHIO

For more details circle NED-580 J3 on enclosed inquiry slip

RYNEL PRECISION FINE-PITCH GEARS



Assure Laboratory-Tested Performance

DESIGNERS AND SUPPLIERS

Electronic
Instrument
Communication
Power Tool
and
Appliance

FINE PITCH GEARS

MEMBER AGMA

Rynel laboratory performance is a sure-check of gear tolerances and interchangeability. It provides you with a test-run of dependable operation and quality.

With complete control over blanks to finished gears, Rynel skilled inspectors check roll, bearing, concentricity, profile, lead and spacing to your exact requirements.

Send blue prints to Rynel engineers for estimates or design suggestions on your Fine Pitch Gear Requirements.

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New Concepts In Fine Pitch Gear Supply.

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SPUR · HELICAL · WORM · WORM GEAR · INTERNAL · SEGMENT · RATCHET · STRAIGHT BEVEL GEARS

▲ For more details circle NED-581 J3 on enclosed inquiry slip ▲

Don't clutter up your shop with loose coils of air hose. See how **Schrader's "Tuck-Away Hose Reels** will add new safety to your use of air — how they'll keep air lines out of harm's way . . . eliminate a traffic hazard in your shop.

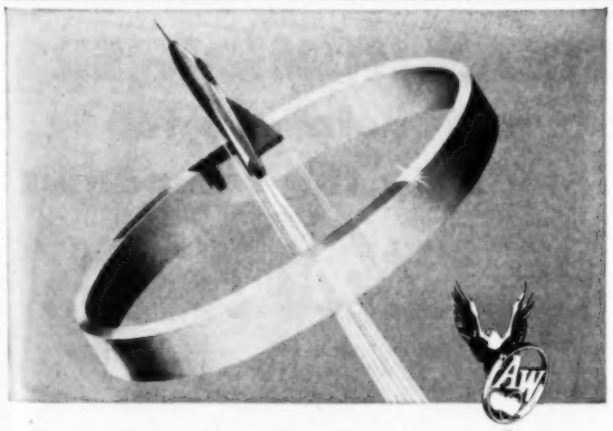
Compact, easy to install, Schrader Hose Reels deliver just the wanted length of hose, rewind it quickly with a slight tug.

Write for details on the Schrader "Tuck-Away" Hose Reel and other Schrader air accessories that will help you get the most out of your air line equipment. Write Schrader today.

A. SCHRADER'S SON

Division of Scovill Manufacturing Company, Incorporated
459 Vanderbilt Ave. Dept. E-48 Brooklyn 38, N. Y.

▲ For more details circle NED-582 J3 on enclosed inquiry slip ▲



Every Major Jet Engine Manufacturer* uses "AMERICAN WELDED" Component Parts

Rings, turbine casings, assemblies — or other circular welded components — if your requirements call for either fusion or resistance welding of ferrous or non-ferrous metals, our Product Development Division can help you. American Welding provides designing, engineering, metallurgical and machining facilities. Give our local representative a call — or write direct — we will be glad to study your problem.

*United States

THE AMERICAN WELDING & MANUFACTURING CO.
170 DIETZ ROAD • WARREN, OHIO

▲ For more details circle NED-583 J3 on enclosed inquiry slip ▲

STEAM CLEANING MACHINE has graduated pressure range

Model LH Clayton-Kerrick steam cleaner is capable of discharging 150 gallons of balanced cleaning solution per hour. Self-contained unit has a graduated range of cleaning pressures, ranging from 30 psi for such jobs as paint stripping to 100 psi for cleaning heavily-encrusted or grease-coated parts and surfaces. Full working pressure is attained in 2 minutes from a cold start. Oil and gas fired, electric and gasoline engine driven models are available in portable, stationary or trailer types. Swivel handle gun and 25 ft of hose are standard. Made by **Clayton Mfg. Co.**, Dept. N, P. O. Box 550, El Monte, Calif.

▲ For more details circle NED-584 J3 on enclosed inquiry slip ▲

BUTANE-PROPANE HOSE flexes at —45° F without cracking

Light in weight and highly flexible, type 1533 butane-propane hose for engine and other permanent type applications is impervious to all LP gas products and can be flexed at −45° F without cracking or leaking. Reinforcing steel wire braid within hose body not only increases hose strength, but provides safe conductivity of static electricity through contact of braid ends with hose fitting. Seamless synthetic rubber inner tube and two heavy cotton braids, one forming exterior cover, add to reinforcement. Assembly includes Aeroquip detachable, reusable fittings. Made by **Aeroquip Corp.**, 303 S. East Ave., Jackson, Mich.

▲ For more details circle NED-585 J3 on enclosed inquiry slip ▲

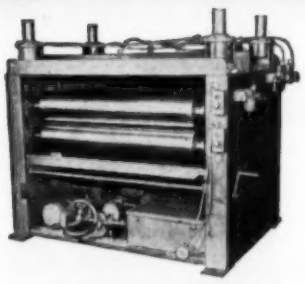
VOLTAGE TESTER plastic case is enclosed

Nominal line voltages from 110 to 550 v ac, and 110 to 600 v dc are indicated by this voltage tester which also distinguishes between alternating and direct current and shows polarity. Prod handles are integrally molded to Neoprene insulated leads and include tip insulation and safety rings. One-piece plastic case is enclosed to keep out dust and moisture. Interior features solenoid coil secured at both ends to prevent movement in case and parallel-wired neon lamp. Coil leads are isolated to avoid cross-overs. Prod storage wells, prod mounting socket and color-coded scale are other features. Made by **Ideal Industries, Inc.**, 1032 Park Ave., Sycamore, Ill.

▲ For more details circle NED-586 J3 on enclosed inquiry slip ▲

UNION AUTOMATIC COMPOUND SPREADERS

SAVE *8 WAYS



1 "Die life increased 75%."
2 "Production increased 20%."
3 "Compound saving of 16%."
4 "Rejects reduced 10%."
5 "One helper eliminated."
6 "Paid for itself in 54 days."
7 "Able to use salvage stock for some operations."
8 "25,000 more pieces before changing dies."

MODELS TO FIT ANY STOCK UP TO 96" WIDTH

Union is the foremost designer and manufacturer of roller coating machines for application of drawing or stamping compounds and protective coatings.

Models may be equipped with hardened steel, or with neoprene-covered rolls—also with heated or cooled rolls—to meet your individual requirements.

*The above claims are based on actual statements by users, both large and small—a number of whom have ordered a second and third machine.
Complete data and agent's name on request. Union will design and/or manufacture coating machines to meet your specific requirements.

UNION TOOL CORP.
318 E. MARKET ST., WARSAW, IND., U.S.A.

USERS SAY UNION CUTS COSTS, SPEEDS PRODUCTION

▲ For more details circle NED-587 J3 on enclosed inquiry slip ▲

new 44 Ways Better

A great new line of Toledos! *44 new features* are now added to the traditional accuracy and dependability of Toledo Scales. Complete range of types and capacities. Get your scale information up-to-date . . . write today for the new condensed catalog No. 2001. Toledo Scale Company, Toledo 1, Ohio.

TOLEDO®
HEADQUARTERS FOR SCALES

Model 2181 —New version of the world's most widely used portable dial scale.

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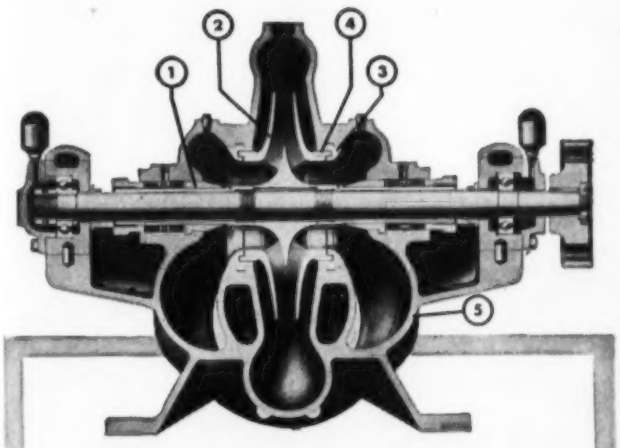
DE LAVAL SINGLE STAGE CENTRIFUGAL PUMPS

for dependable service



1 Shaft Sleeves are screwed on, to abut the impeller and make a water-tight joint. Sleeve expands freely and independently of shaft when temperatures change. There is no tendency to buckle.

2 Impeller hydraulically balanced, finished on all surfaces.

3 Labyrinth Wearing Rings held accurately in machined grooves in both case and cover.

4 Impeller Wearing Rings threaded on impeller, opposite to rotation.

5 Pump Case horizontally split; machined to limit gages.

You can count on the performance of the De Laval Single Stage Centrifugal Pumps because they are precision-made to high manufacturing standards and incorporate many quality design features.

They operate at high or low speeds, at high or low heads . . . with maximum efficiency.

For example, De Laval G, I and K Single Stage Double Suction Pumps have a capacity range of 175 gpm to 6,000 gpm and heads to 300 feet. They are available in sizes ranging from 4" suction and 3" discharge to 14" suction and 12" discharge. Write for Bulletin 1002.

De Laval also furnishes larger centrifugals for capacities up to 70,000 gpm. Bulletin 83-29R sent on request.

DE LAVAL *Centrifugal Pumps*

DE LAVAL STEAM TURBINE COMPANY
808 Nottingham Way, Trenton 2, New Jersey DL-296

▲ For more details circle NED-589 J3 on enclosed inquiry slip ▲

"WOVEN-Gards"

BETTER HAND PROTECTION

at amazing low cost

"Woven-Gards" are hand protectors, mitts, pads, sleeves and aprons made of a long wearing woven cotton safety material. Provide flexibility, comfort, resistance to abrasion and cutting. Highly oil absorbent. Excellent for handling oily, slippery sheets. Porous weave makes them the finest protector for handling lower temperature jobs. Excellent protection at lowest cost. We manufacture a complete line of industrial safety apparel. Write for free catalog with price list.

INDUSTRIAL GLOVES COMPANY, 1521 Garfield Street, Danville, Illinois
A Corporation
(In Canada: Safety Supply Co., Toronto)

▲ For more details circle NED-590 J3 on enclosed inquiry slip ▲

The pipe and bolt threading machine that gives you Top Performance RIDGID "500"

...with exclusive new quick-opening

Quadritype Die Head

RIDGID engineering does it again! New "500" threads, cuts and reams with the efficiency and speed you've long wanted. Ready for work on any size pipe, ⅛" to 2", in seconds! Independent operation of tools, more than ample power, concealed oil system — a score of other great new features. No wonder its popularity has been immediate and wide-spread. See it, try it at your Supply House — buy the more-for-your-money RIDGID "500"!

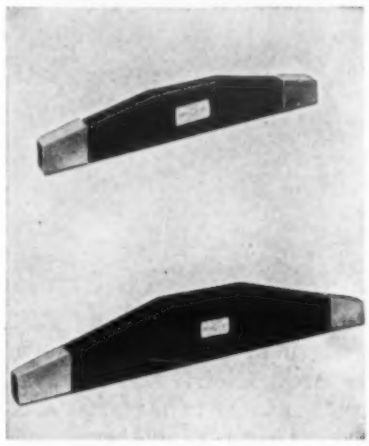
New Quadritype die head adjusts instantly 1" to 2" regardless of position of lever, without removing dies or head from machine. Same work-saver feature in Dualtype die heads—¼" and ⅜", ½" and ¾". Monotype also available, ⅛" to 2"—also bolt die heads, ¼" to 2".

THE RIDGE TOOL COMPANY • ELYRIA, OHIO

RIDGID
Work-Saver Pipe Tools

▲ For more details circle NED-591 J3 on enclosed inquiry slip ▲

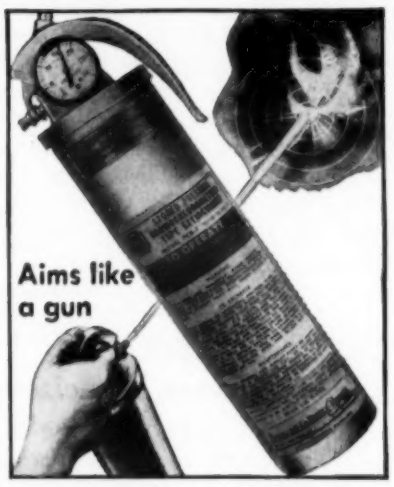
STRAIGHT EDGES made of granite in various lengths



Accurate up to 0.00005-in., straight edges produced from black granite in lengths up to 48 in. can be used for precision measurement and checking of surfaces of machine tool beds and areas where absolutely flat surfaces must exist. They require no oiling, are temperature inert and are stable against warp and deflection. Ends are tapered and fitted with leather grips for easy handling. Storage case has resilient nesting pads. Made by **Collins Microflat Co.**, 2326 E. Eighth St., Los Angeles 21, Calif.

▲ For more details circle NED-592 J3 on enclosed inquiry slip ▲

FIRE EXTINGUISHER for combatting class B and C fires



Alfco model PCB-1 fire extinguisher, a 1-qt trigger-operated, stored pressure unit charged with bromochloromethane, offers protection against class B and C fires. Fast-acting vaporizing liquid extinguishing agent is effective on flammable liquid and electrical type fires. Lightweight unit, designed for one-hand use, is aimed like a gun and can be operated by persons wearing heavy work gloves. Operation can be under conditions of high or low temperature, in sand or dust, humidity or salt spray. Made by **American-LaFrance-Foamite Corp.**, 133 E. LaFrance St., Elmira, N. Y.

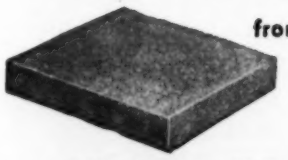
▲ For more details circle NED-593 J3 on enclosed inquiry slip ▲

DO YOU KNOW? A new all-nylon Traction Express Silvertown truck tire is available. It has delivered over 100,000 miles in actual service under all types of conditions. Offered in sizes ranging from 8.25-20 ten-ply to 11.00-22 twelve-ply, tire is made by B. F. Goodrich Co., Dept. E, 500 S. Main St., Akron 18, O.

▲ For more details circle NED-594 J3 on enclosed inquiry slip ▲

Armstrong's

VIBRACORK CUSHIONS VIBRATION



from Hydraulic Presses, Pumps, Compressors, and many other types of Machinery and Equipment

...ACTUALLY FLOATS THE LOAD ON MILLIONS OF AIR CELLS!

Vibracork is a resilient machinery isolation cork plate made of pure cork granules, compressed and baked under pressure.

Convenient to stock — Standard sheets, 12" x 36"; Standard density 2" and 3" thick; Heavy density, 1", 2" and 3" thick.

Easy to use — Can be cut to size on the job with an ordinary hand saw.

Loading range — Standard density, 1500# to 4000# per. sq. ft.; Heavy density, 5700# to 8500# per. sq. ft.

Availability — Immediate delivery. Korfund is sole distributor for the United States.

For installation data and further information, ask for Bulletin VC-500.

THE KORFUND CO., INC.

KORFUND VIBRATION CONTROL — SPRINGS — RUBBER — CORK

48-35P Thirty Second Place • Long Island City 1, N. Y.

▲ For more details circle NED-595 J3 on enclosed inquiry slip ▲

Panqborn HYDRO-FINISH

- deburrs • removes scale
- prepares surfaces for electroplating
- removes, blends grinding lines
- finishes threaded sections for fit
- improves die making and maintenance
- improves cutting tool life.

PANGBORN Hydro-Finish does all these jobs and more! Fine mesh abrasives suspended in water give you a precision finish . . . hold tolerances to .0001". Vary abrasives, air pressures, work distances, ratio of liquid to abrasive and you can do almost any finishing job faster and better!

GET THE FACTS on how Hydro-Finish can save *you* money! Write for Bulletin 1400A to: PANGBORN CORPORATION, 2400 Pangborn Blvd., Hagerstown, Md.

Panqborn BLAST CLEANS CHEAPER
with the right equipment for every job

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standardize on standard

UNBRAKO SOCKET SCREW KEYS

UNBRAKO Keys are suitable for use with all standard makes of hex socket screws. They are made of heat treated alloy steel; ends are burr-free and smooth, fit easily into socket; lengths are uniform, and the across flats dimensions are held to close tolerances for positive wrenching and long life.

Standard sizes are available in quantity or as sets in key folds. Write for literature. SPS, Jenkintown 24, Pa.

Our Fiftieth Year: A START FOR THE FUTURE

UNBRAKO SOCKET SCREW DIVISION **SPS** JENKINTOWN PENNSYLVANIA

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STEAM HUMIDIFIERS may help you too They help the companies *on this list...*

THIS partial list of Armstrong Steam Humidifier users names over 700 companies in 18 basic industries. All are aware of the serious effects of dry air on their operations, and all eliminated dry air troubles by installing steam humidifiers. These installations have proven Armstrong Steam Humidifiers to be a dependable means of automatically increasing humidity by adding clean dry steam to the air.

Why put up with costly dryness when a low cost solution is available. *Get complete details. Send for free* BULLETIN No. 1774 *and list of users.*

ARMSTRONG MACHINE WORKS
819 Maple Street • Three Rivers, Michigan

ARMSTRONG STEAM HUMIDIFIERS

▲ For more details circle NED-598 J3 on enclosed inquiry slip ▲

NEW ADJUSTABLE DRILL JIG
eliminates layout; cuts drilling time

Used for drilling holes through round stock and hex stock from ¼" to 2" and cap screws from ¼" to 1¼", the new Mathewson Adjustable Drill Jig eliminates layout and can cut drilling time on small lots to a fraction. And it eliminates the costs of special jigs for larger quantities. Holes for cotter pins, set screws, drive pins for bayonet joints, oil holes in tubular sections, and wiring holes in cap screws, are all typical of the operation that can be done more economically with this jig. Hole diameters range from .052" to .531", using your A.S.A. standard slip bushings. The hardened V-block has two 60-degree V's for centering round or hexagonal stock, one for ¼" to 21/32" diameter, one for 21/32" to 2" diameter. Adjustable stop for locating work longitudinally for drilling any distance from end, may be used on either side. Adjustable bushing carriers hold slip bushings and clamp work securely. Jig highly successful in permitting use of inexperienced drill operators. For circular write to: **Mathewson Machine Works**, 22 Hancock St., Quincy, Mass. *Advt.*

▲ For more details circle **NED-599 J3** on enclosed inquiry slip ▲

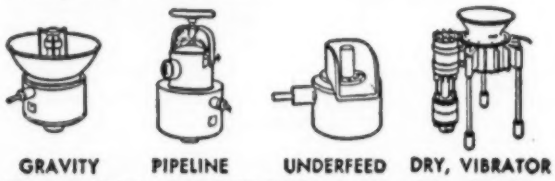
Facts about Magnetic Separation *and how it* Pays Off

Send for BULLETIN 56E

Here is full information on how FRANTZ Electromagnetic FERROFILTERS, for the process industries, remove iron contamination from liquid suspensions in all viscosities, as well as powdered and granular materials. This new bulletin provides operating and installation data on the FRANTZ line of magnetic separators with tables of sizes and capacities to help you select the proper type for your specific application. Send for your copy today.

FERRO FILTER® Magnetic Separators

S. G. FRANTZ CO., Inc.
P. O. Box 1138
Trenton 6, N. J.



GRAVITY PIPELINE UNDERFEED DRY, VIBRATOR

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You can provide easy mobility to a variety of industrial products with

IRONBOUND ALL-PURPOSE HANDLING UNITS . . .

POPULAR IRONBOUND FLO TRUK

● An easy to handle ruggedly constructed unit for carrying bulky and heavy loads at lowest cost. Seven standard sizes with one or two push handles makes it easy to select the proper truck for your requirements. Ask an Ironbound engineer for suggestions.

The HANDY for furniture and similar items. The HAULER for cases, crates, tote boxes, etc. The HUSKY for general use throughout the plant.

THE IRONBOUND "SAFETY-SKID" WITH ROUND CORNERS

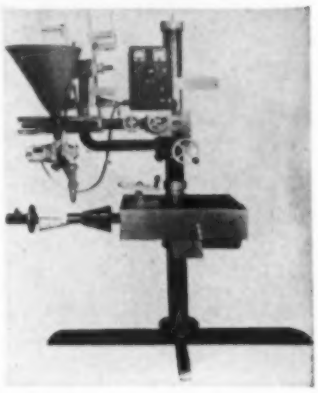
Ironbound construction assures long hard use with complete safety to product and operator. Still the time proven method for handling of materials efficiently and economically.

IRONBOUND
BOX & LUMBER COMPANY
Materials Handling Division
55 HOFFMAN PLACE • HILLSIDE, N. J.

MANUFACTURERS OF QUALITY BUILT SKIDS, SEMI-LIVE SKIDS, FLOOR TRUCKS, ROLL TRUCKS, DOLLIES AND PRY BARS

▲ For more details circle **NED-601 J3** on enclosed inquiry slip ▲

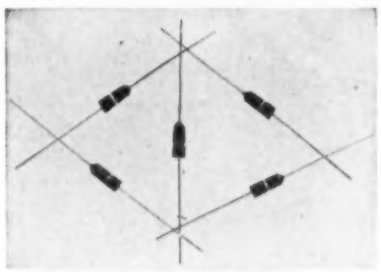
WORN PART REBUILDER
handles work up to 40 in. diameter



Rebuilding of wheels, pulleys, track rollers, idlers and cones is possible with the Mir-O-Col K-2 automatic re-builder. It accommodates work of any size and shape up to 40-in. diameter and welds 30 in. of bead per minute. All types and sizes of automatic wire up to ¼-in. can be used with the machine. Features are spindle speeds variable from ¼ to 3 rpm, lock-on centers for concentric build-up and elimination of slippage, adjustable welding table and bar guide to keep flux around arc. Submerged arc principle of automatic welding is used. Twin head machine can handle two jobs of different diameters at the same time, using one operator. Made by **Mir-O-Col Alloy Co.**, 316 North Ave. 21, Los Angeles 31, Calif.

▲ For more details circle **NED-602 J3** on enclosed inquiry slip ▲

SMALL DIODES
rated dissipations up to 150 milliwatt



Extremely small diodes have small-area junction and ratings at continuous dissipations up to 150 milliwatts. Units will operate at unusually high voltages and currents, and exhibit rapid switching action and good high frequency characteristics. They are also able to withstand high temperature-humidity ambient conditions. Types available include one with high back-voltage characteristic, another having a high forward current and a third classed as general purpose. Protecting capsule is of thermosetting plastic molded after diode fabrication. Polarity is indicated by diode shape and designation by RTMA color code system. Made by **National Union Radio Corp.**, Transistor Div., Sales Dept., Jacksonville Rd., Hatboro, Pa.

▲ For more details circle **NED-603 J3** on enclosed inquiry slip ▲

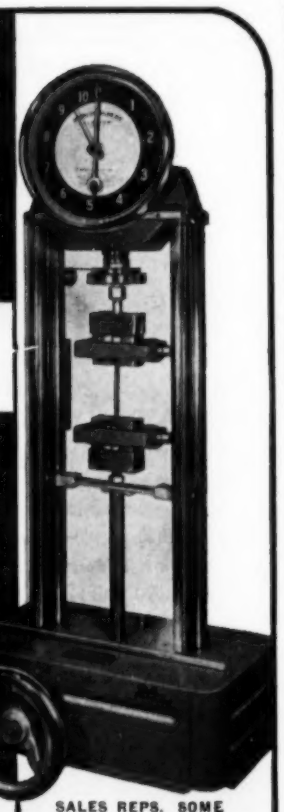
Crane Scales

Baldwin-Lima-Hamilton Corp.—Type SR-4 crane scales are described in illustrated bulletin 4105. Standard units have ratings of 5, 12½ and 25 tons, and are electrically connected to any of the company electrical indicating and recording instruments, also described. Complete specifications of all units are shown, together with illustrated applications.

▲ For more details circle **NED-604 J3** on enclosed inquiry slip ▲

DILLON *Universal* **TESTER**

Motorized or Hand Operated



Engineering skill at its highest! COMPRESSION-TENSILE-TRANSVERSE and SHEAR testing combined in one portable instrument.

7 different gauges available—all interchangeable! Capacities from 250 up to 10,000 lbs. Dillon Universal Tester handles rounds, flats or special shapes and—for split accuracy—is calibrated with Proving Ring certified by U. S. Bureau of Standards. Has maximum hand, self-aligning grips, ball bearings. America's most popular low-priced tester! Write for illustrated brochure and FREE Tensile Strength Computer.

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(Suburb of Los Angeles)
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SALES REPS. SOME TERRITORIES OPEN — WRITE.
WRITE FOR LITERATURE AND FREE TENSILE STRENGTH COMPUTER.

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We make satisfied customers

Package your products in Lermer Plastic durable, handsome containers. They are shatterproof, 75% lighter than glass, available clear or opaque in many colors, can be printed or decorated and are available with metal or plastic closures. Write for complete catalog information and samples. If possible, send along products for particular suggestions.

LERMER PLASTICS, INC.
Pioneers and Pacesetters in Plastic Packaging
514 South Ave., Garwood, New Jersey

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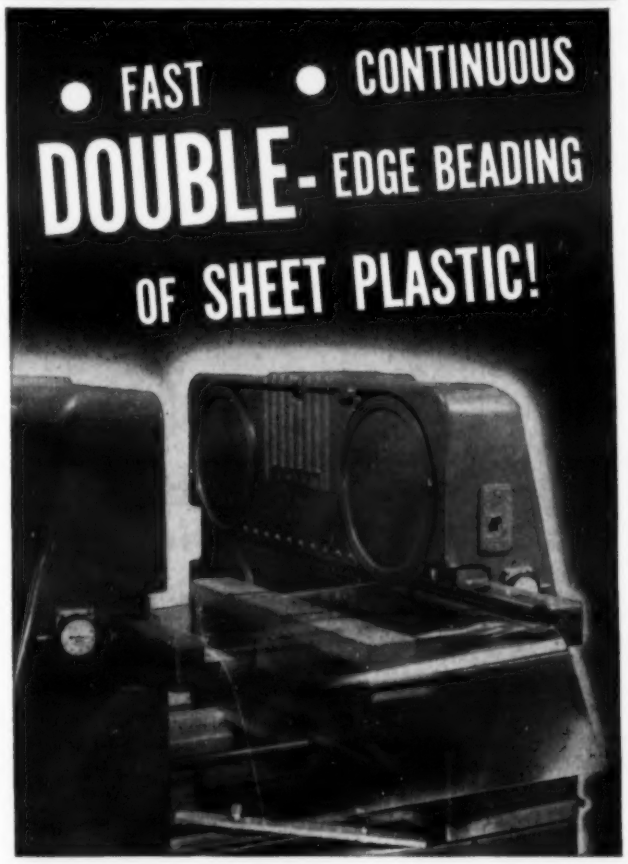
● FAST ● CONTINUOUS
DOUBLE-EDGE BEADING OF SHEET PLASTIC!



Model-144* THERMOBEADER *Duplex

Adjustable for handling sheet plastic rolls, strips or blanks 2" to 20" wide, the Thermobeader Duplex simultaneously beads *two* parallel edges at high speed. Dual heads can ALSO be used *independently* for single edge beading which gives you the same capacity as TWO single edge beaders. Substantially reduces production costs!

The TABER LINE of PLASTIC FORMING EQUIPMENT also includes:

THERMOFOLDER: 180° folding, one operation.
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CYLINDER BEADER: For beading both ends simultaneously of pre-formed plastic cylinders.
CYLINDER FABRICATOR: For forming cylinders from plastic sheet.
THERMODRAW PRESSES: For drawing caps, covers, jacketing and embossing.

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SECTION 16
111 Goundry St., North Tonawanda, N. Y.

☐ Please send me information on Taber Thermobeader Duplex
☐ Please send me information on other Plastic Forming Equipment

NAME .....
COMPANY .....
ADDRESS .....
CITY ..... ZONE ..... STATE .....

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90-A

This new engineering manual of facts on MUELLER BRASS CO. TUF-STUFF® ALUMINUM BRONZE ALLOYS is ready.

Write for your copy today

MUELLER BRASS CO. • PORT HURON 27, MICH.

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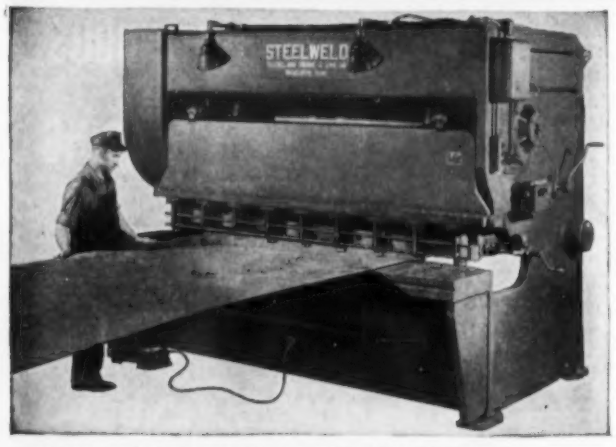


ALL STEELWELD SHEARS
Controlled Electrically!

Convenient electric foot-switch operation is standard for all Steelweld *Pivoted-Blade* Shears. The switch can be slid around floor to wherever handiest It eliminates tiresome leg lifting required for usual mechanical foot treadle.

Steelweld Shears are built in all sizes for plate to 1-1/4" thick. Get the facts on these truly modern machines.

STEELWELD Pivoted-Blade SHEARS CATALOG No. 2011

Send for free Catalog No. 2011

THE CLEVELAND CRANE & ENGINEERING CO.
6609 East 282nd St., Wickliffe, O.

STEELWELD SHEARS

For more details circle NED-609 J3 on enclosed inquiry slip

NEW SBS WATERLESS WASHSTATION*

"brings the washroom to the worker"*

for only $52.50 per unit
(F.O.B. Saginaw, Mich.
Towel Dispensers not included)

SBS Waterless Washstations are complete units for hand washing on the job. Because they dispense SBS-30 Waterless Skin Cleanser, these Washstations require no plumbing . . . SBS-30 is simply rubbed on the hands and wiped off along with all the soil.

SBS Waterless Washstations —

• In Trouble Spots — Avoids workers use of irritating, harmful solvents. Quickly and safely removes tars, greases, paints, varnishes and other hard-to-remove soils.

• On the Production Line — Cuts to a minimum costly interruptions for hand washing.

• Actually Earn You Money — By eliminating one unnecessary trip per day for hand washing by only 10 men, you can save up to $720 annually.

Fill out and mail the coupon below for complete information about SBS Waterless Washstations and our 30-day no-risk money back trial offer.

*Trademark

92-A

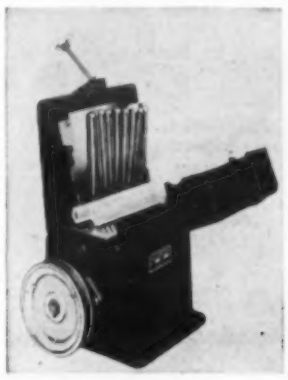
SUGAR BEET PRODUCTS CO., Dept. 7F, SAGINAW, MICHIGAN
Sirs: Please send me full information about the new SBS Waterless Washstation and your 30 day no-risk money back trial offer.

NAME_____
TITLE_____
COMPANY_____
CITY_____ ZONE_____ STATE_____

SUGAR BEET PRODUCTS CO. • Saginaw, Mich.
Chemical By-Products Division

For more details circle NED-610 J3 on enclosed inquiry slip

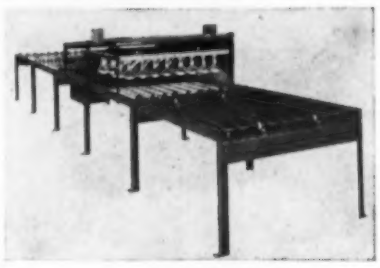
MULTIPURPOSE PUMP
does not contact material pumped



Capable of handling corrosive liquids, gases, or liquids with abrasive material in solution, improved model Sigmamotor pump (*NED—Feb.* 1948) has a series of chrome plated steel levers which exert pressure in succession on tubing containing the material to be pumped. Unit now accommodates tubing up to 1-in. diameter and has a hinged top so that tubing can be placed in position without having to be disconnected. Different sizes of tube can be used simultaneously, and several fluids can be pumped in proportion, simultaneously and independently. Unit will handle from 45 to 250 gallons per hour at 500 crankshaft rpm, and measures 12-in. high. Suitable tubing can be supplied by manufacturer. Made by **Sigmamotor, Inc.,** 519 N. Main St., Middleport, N. Y.

For more details circle NED-611 J3 on enclosed inquiry slip

INFRARED OVEN CONVEYOR
also available without oven



Utilizing tempered spiral wires driven over steel pulleys to convey parts, Heli-Veyor is available with or without infrared drying oven and can be used if desired for a variety of short-run parts transfer applications. Illustration shows unit fitted with oven, which has a full load capacity of 12,000 w with 250-w lamps. In this form, unit is useful for screen process work, since lamp arrangement, distance from work and heating effect are easily set and controlled. Standard conveyor units are 4-ft wide, 32-in. high and have a total length of 23 ft. A variable speed power unit gives a mean travel speed of 10 ft per minute. Made by **Miskella Infra-Red Co.,** 7305 Grand Ave., Cleveland 4, O.

For more details circle NED-612 J3 on enclosed inquiry slip

Line Support Clamps

Thomas Associates—Line of 40,000 types and sizes of bare metal and cushioned line support clamps, wire harness and multiple support clamps is covered in detail in 64-page plastic bound engineering manual. Also covered are such related items as brackets, busbars and laminated anchor nut or reinforcing shims. Visual index makes selection of desired part easy.

For more details circle NED-613 J3 on enclosed inquiry slip

RE-NU TOP
STEEL-BOUND
SKID PLATFORMS

BUILT TO LAST A LIFETIME

500 LB. LOAD UP TO 10 TONS

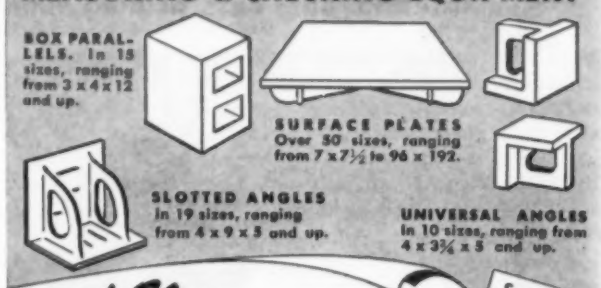
Designed to fit your loads and equipment. Plain bolted construction for use with hand lift trucks or bolted and welded under frame with armored ends for rough handling by powered trucks. Special purpose skids can be equipped with end racks, shelves, stake pockets, crane hooks, rounded corners and other special features.

SECTIONAL BINS ROLLAWAY SKIDS SKID-BOXES

THE LANHAM COMPANY
Magnolia & 12th Sts., Louisville, Ky.

For more details circle NED-614 J3 on enclosed inquiry slip

Dependable
MEASURING & CHECKING EQUIPMENT



BOX PARALLELS. In 18 sizes, ranging from 3 x 4 x 12 and up.

SURFACE PLATES Over 50 sizes, ranging from 7 x 7½ to 96 x 192.

SLOTTED ANGLES in 19 sizes, ranging from 4 x 9 x 5 and up.

UNIVERSAL ANGLES in 10 sizes, ranging from 4 x 3¾ x 5 and up.

and Now
HAND WHEELS, KNOBS, HANDLES
Cadmium Plated READY TO DELIVER
Non-rusting — good looking

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SOLID ROTARY MACHINE HANDLES

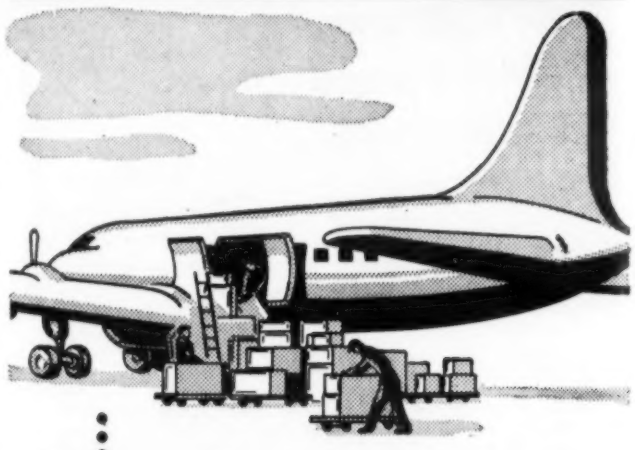
STRAIGHT and OFFSET TYPE

CAST IRON MALLEABLE IRON

We also build jigs, fixtures, special tools and machinery. Send us your blueprints.

MACHINE PRODUCTS CORPORATION
6771 E. McNichols Rd. Dept. B Detroit 12, Mich.

For more details circle NED-615 J3 on enclosed inquiry slip



When Flying Freight
AETNA Plywood
LIGHTENS THE LOAD

Nowadays just about every kind of product is shipped by air freight. Dollars in shipping costs are saved by manufacturers who lighten the load by using AETNA utility plywood for crates and boxes.

Leading makers of aircraft, too, lighten the weight of planes by using AETNA plywood for cabin walls, instruments panels, propeller blades and many other parts.

AETNA—*and only AETNA*—carries plywood from mills all over the world. Out of this wide range of stock AETNA furnishes plywood for any industrial or decorative use. Tough as many metals and *lighter in weight*, AETNA plywood costs less per square foot than any material you can compare with it.

AETNA'S engineering staff provides technical help so important to the efficient application of plywood. This service is FREE.

Call your nearest AETNA office or branch warehouse, or write, for prices, information and technical plywood help.

WRITE AETNA for the RIGHT PLYWOOD

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1718 N. Elston Ave. • Chicago 22, Illinois
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BRANCH WAREHOUSES: Grand Rapids 7, Mich.; Indianapolis 2, Ind.; Rockford, Ill.

PLYWOOD for every purpose — every industry

For more details circle NED-616 J3 on enclosed inquiry slip

. . . If the HydroLectric Lift Truck makes savings of 50 to 80% in your material handling.

HERE'S WHY...

HYDROLECTRIC is easier to operate because of its finger-tip control that is simplicity at its best.

HYDROLECTRIC does the job safely and quickly with its exclusive Dyna-Dual Power Unit that is quiet, odorless, powerful, rugged, and maintenance is practically nil.

HYDROLECTRIC costs less to operate than any other leading truck, and industry after industry has proved that it pays for itself in 3 months.

Want proof? Write for complete information.

LIFT TRUCKS INCORPORATED
2423-31 SPRING GROVE AVE.
CINCINNATI 14, OHIO

Over 1000 models and sizes

HYDROLECTRIC, HYDROMATIC and RED ARROW LIFT TRUCKS

For more details circle NED-617 J3 on enclosed inquiry slip

You don't need to bolt machines down!

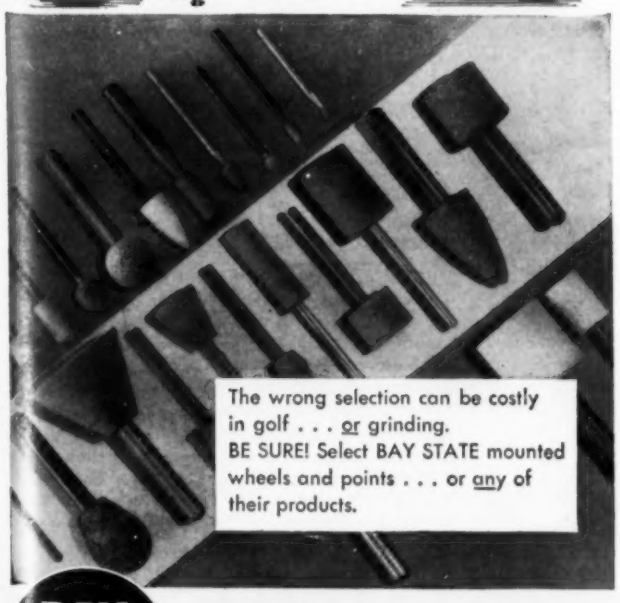
*Put them on Vibra-Mount*Felt and SAVE YOUR FLOORS*

In most cases machines placed on Vibra-Mount Felt do not need to be bolted down. The strong Vibra-Mount adhesive between felt and floor and felt and machine holds firmly, preventing "walking." This method of mounting is simple, fast, and inexpensive. And there is a great big plus value in reduction of vibration, as much as 85%! Save your floors, lessen machine down-time, stop shaking employees and machines. When installing new machines or relocating your present equipment, use Vibra-Mount Felt. Simple details and further information will be found in the booklet "How to Reduce Vibration." Write for it on your company letterhead.

*T.M. Reg

American Felt Company
TRADE MARK
GENERAL OFFICES:
62 GLENVILLE ROAD, GLENVILLE, CONN.

For more details circle NED-618 J3 on enclosed inquiry slip



The wrong selection can be costly in golf . . . or grinding.
BE SURE! Select BAY STATE mounted wheels and points . . . or any of their products.

BAY STATE

BAY STATE ABRASIVE PRODUCTS CO.
Westboro, Massachusetts, U. S. A.
Branch Offices and Warehouses:
Chicago, Cleveland, Detroit, Pittsburgh
Distributors — All Principal Cities
In Canada: Bay State Abrasive Products Co. (Canada) Ltd., Brantford, Ont.

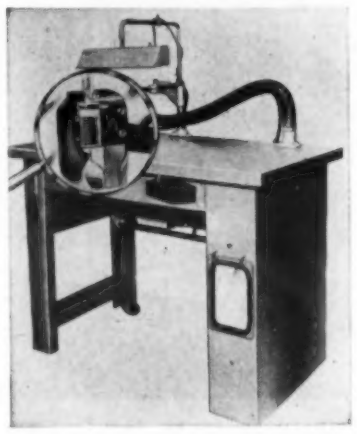
For more details circle NED-619 J3 on enclosed inquiry slip

CRANE SCALES
in 1000 to 10,000-lb ranges

Accurate to within 2/10 of 1 per cent of capacity and provided with 25 per cent tare adjustment, line of crane scales is available in 1000, 2000, 5000 and 10,000-lb ranges. Units are equipped with top U-bolt and a 360-degree swivel hook, and add approximately 19 in. to required crane headroom. Other features include unbreakable plastic crystal for the 21½-in. diameter dial which is tilted down to permit readings to be taken from almost directly underneath if required. Pointer is fine-tipped for accuracy and has large body for easy distance reading. Units have an integral stand for convenient storage when not in use. Made by **A. H. Emery Co.**, Dept. A, New Canaan, Conn.

For more details circle NED-620 J3 on enclosed inquiry slip

THREAD TRIMMING MACHINE
has cutting and trimming actions



Providing both cutting and trimming actions, the Dual-Purpose Clip-Matic enables the operator to cut cloth extensions, tapes, ribbons and straps as well as regular threads by the use of one cutting blade, working from one side of the blade only. Upper part of the special blade is fitted with an opening in which a tiny up and down knife cuts binding and straps. The lower part of the blade has standard openings for regular threads. Features include regulated suction for different materials which is synchronized with the cutting action; snag-proof, open table top; and open view waste compartment. Made by **Cutting Room Appliances Corp.**, 49 W. 25th St., New York 10, N. Y.

For more details circle NED-621 J3 on enclosed inquiry slip

Diesel Engine Design

Murphy Diesel Co.—48-page booklet explains features of the range of company diesel engines, including unique injector, head, valve and piston design. Models are available in 90 to 240 hp ratings at 1200 and 1400 rpm. More than 50 installations are pictured, including industrial and marine units and motor-generator sets.

For more details circle NED-622 J3 on enclosed inquiry slip

Where to use INSUL-MASTIC Coatings

These *Superior* coatings can end many problems in your plant for many years to come.

- They prevent corrosion from moisture, acids and other chemicals!
- They control condensation or sweating!
- They insulate!
- They stop walls and roofs from leaking!
- They keep insulation dry and protected!
- They deaden sound!
- They attractively resurface old buildings!

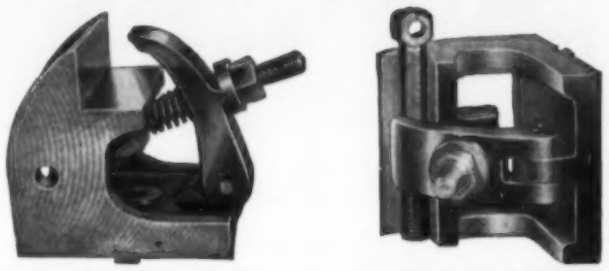
A 44-page catalog will give you more ideas for employing INSUL-MASTIC *Superior* coatings. Write for it today.

Insul-Mastic
CORPORATION OF AMERICA
Oliver Building • Pittsburgh 22, Pa.
Representatives in Principal Cities

For more details circle NED-623 J3 on enclosed inquiry slip

·HART·
MILLING FIXTURES
MASTERS OF 1000 SETUPS

ELIMINATE 1000 NEEDS FOR SPECIAL—AND EXPENSIVE JIGS AND FIXTURES



USED IN VERTICAL POSITION

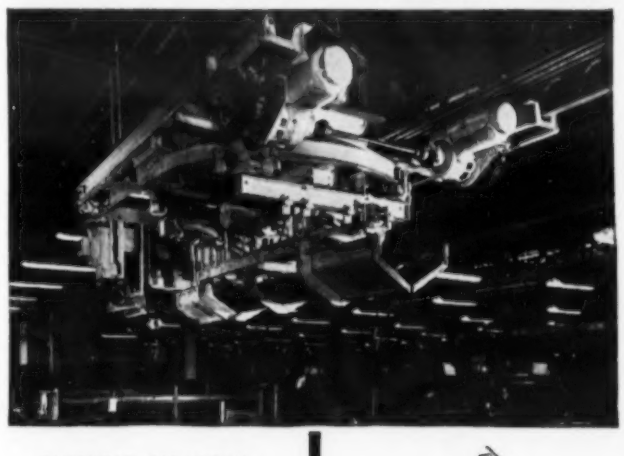
HART MILLING FIXTURES make themselves popular and profitable in any shop—are used in either horizontal or vertical position. Will hold round, hexagonal, octagonal, or square stock, aligning the work with the machine. Grip holds the work on bottom as well as on back. Generally sold in pairs. Made in 4 sizes—to hold stock from ½ to 5 inches.

Write for new bulletin.

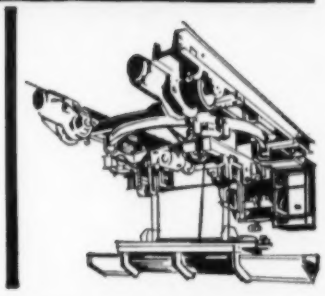
WALTER W. FIELD & SON INC.
39 HAYWARD STREET, CAMBRIDGE 42, MASS.

For more details circle NED-624 J3 on enclosed inquiry slip

INCREASES FLOOR CAPACITY 50%



OVERHEAD MONORAIL SYSTEM PERMITS INSTALLATION OF 50% MORE SCREW MACHINES —WITHOUT EXTRA BUILDING



A large manufacturer of farm implements solved "expansion pains" in the automatic machine department by installing a Louden Monorail System to handle bar stock.

In addition to increasing by 50% the number of machines in the same floor area, the labor force in this department was cut from 9 men to three men.

"Down time" from shortage of raw stock has been virtually eliminated, since the carrier cab is in continuous telephone contact with a dispatcher, who directs the supply of bars to machines.

All functions are motor driven and controlled from the cab. The hoist can be rotated 90° to permit accurate positioning of the stock in the machine racks.

FREE ILLUSTRATED BOOK

Case histories telling how Louden Monorail Systems have saved time and money for widely different kinds of industries are described and pictured in a new book called, "Economical Material Handling". Write for your copy.

THE LOUDEN MACHINERY COMPANY
7122 S. Superior Ave., Fairfield, Iowa

Louden
OVERHEAD MATERIAL HANDLING

For more details circle NED-625 J3 on enclosed inquiry slip

Brazes 360 Shells Per Hour

Problem: *Brazing nose adaptors on 105 mm projectiles — fast!*
Solution: *100-kw Allis-Chalmers Induction Heater.*

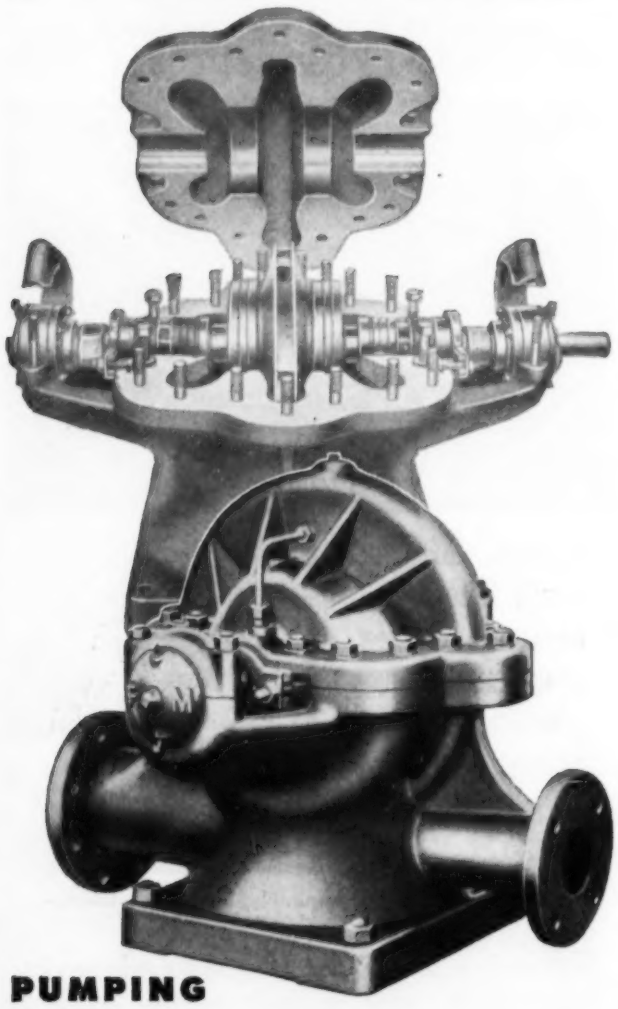
THIS shell manufacturer selected induction heating because he considered it the only way of providing both high production and precise control of heat necessary for this application.

In addition, he has versatility if he needs it. For this same unit can also be used for soldering, annealing, case and through hardening. A simple change of work coils is all that's needed to switch from job to job.

It will pay you to find out how much Allis-Chalmers induction heaters can increase production and reduce your costs. Call your nearby A-C District Office, or write Allis-Chalmers, Milwaukee 1, Wisconsin. A-4118

ALLIS-CHALMERS

▲ For more details circle **NED-626 J3** on enclosed inquiry slip ▲



PUMPING

"down time!"

GOT YOU DOWN?

. . . then you want a Fairbanks-Morse Split-Case Centrifugal Pump—parts are *easily* accessible for the minimum maintenance necessary. Inspection is simple . . . lift the split casing and the entire rotating element can be removed without disturbing driver or pipe connections . . . even the bearings can be removed without the use of a bearing puller!

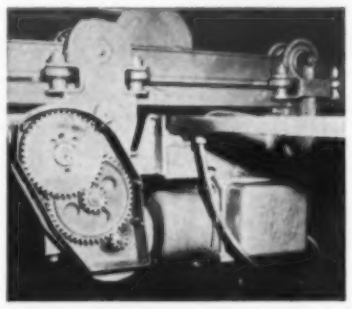
See your Fairbanks-Morse Branch Pump Engineer about his complete pump line . . . or write Fairbanks, Morse & Co., Chicago 5, Illinois.

FAIRBANKS-MORSE
a name worth remembering when you want the best

PUMPS • SCALES • DIESEL LOCOMOTIVES AND ENGINES • ELECTRICAL MACHINERY • RAIL CARS • HOME WATER SERVICE EQUIPMENT • FARM MACHINERY • MAGNETOS

▲ For more details circle **NED-627 J3** on enclosed inquiry slip ▲

TRAMRAIL TROLLEY
up to 18 travel speeds available



Electrically powered, four and eight-wheel trolleys for tramrail service can be furnished with any one of 18 travel speeds by changing two or four gears. Travel speeds range from 56 to 600 fpm, and motors of 1800, 1200 and 900 rpm make the performance still more flexible. Units operate from any common industrial voltage, and are furnished with high starting torque motors specially built for crane and hoist service. Acceleration is controlled to minimize wheel slippage, track wear and undue swinging of the suspended load. Pendant, cab or automatic dispatch remote controls are available in two, three and five step selective types. Made by **Forker Corp.**, 2040 Random Rd., Cleveland 6, O.

▲ For more details circle **NED-628 J3** on enclosed inquiry slip ▲

FOLDING TABLES & BENCHES
one unit will seat 32 adults

Up to 32 adults can be seated for lunches, meetings or other purposes at this Mobil-Fold unit which consists of two 14-ft tables and four 14-ft benches. Tables and benches fold up and lock into steel caster-equipped truck for rolling against wall or to storage area. When unfolding, tables and benches can remain attached to truck for fast reassembly, or detached from truck by turning a key and rolled to any arrangement. Understructure is welded tubular steel, and ¾-in. Philippine mahogany plywood tops have laminated, heat resistant plastic surfaces and backer sheets plus full length formed steel stiffeners. Made by **Schieber Sales Co.**, Dept. NED, Detroit 23, Mich.

▲ For more details circle **NED-629 J3** on enclosed inquiry slip ▲

Steel Weldments

Struthers Wells Corp.—As well as considering the advantages of using steel weldments, 16-page illustrated bulletin shows company production facilities and qualifications, and contains illustrations and short descriptions of typical units which have been successfully contracted. Tables give comparative properties of weldments and show weldability of ferrous metals.

▲ For more details circle **NED-630 J3** on enclosed inquiry slip ▲

GENERAL PLATE
ALCUPLATE®
(Copper-Clad Aluminum)
Reduces Costs
OVER SOLID COPPER OR BRASS

ALCUPLATE Provides High Electrical Conductivity, Soft-Soldering Surfaces, Good Heat Dissipation, Light Weight

Now, you can reduce your cost 15–30% or more over an equal area of solid copper or brass by using General Plate ALCUPLATE.

Made by *permanently bonding* a thin layer of copper to one or both sides of thicker aluminum, ALCUPLATE has practically the same physical and electrical properties as copper, plus the light weight of aluminum. The copper provides an ideal surface for soft-soldering operations, electroplating and other finishes.

ALCUPLATE is widely used in the electrical and electronic fields for terminals, clips, shims, small motor housings, electronic component cases, chassis, and brackets. It is also used for heat transfer assemblies, fin and tube type radiators, printed circuits, costume jewelry and similar applications.

ALCUPLATE can be fabricated by stamping, drawing or forming. Its malleability permits its use in the manufacture of many parts from work-hardened rather than annealed or dead soft materials.

ALCUPLATE is available in coils and flat cut lengths, copper clad on one or both sides of aluminum, 1/16" thick x 13" wide and under.

Technical Data Bulletin No. 702C gives full details. Write for a copy, today.

METALS & CONTROLS CORPORATION
GENERAL PLATE DIVISION
89 FOREST STREET, ATTLEBORO, MASS.

▲ For more details circle **NED-631 J3** on enclosed inquiry slip ▲

- CUTAWAY DRAWINGS
- LIST OF LIQUIDS THAT CAN BE FILTERED
- GENERAL SPECIFICATIONS
- PERFORMANCE DATA
- LIST OF MEDIA USED
- INSTALLATION STORIES
- COMPLETE DATA SHEET

SEND FOR THIS 12 PAGE BULLETIN D-1L
JUST OFF THE PRESS

DOLLINGER STAYNEW FILTERS
DOLLINGER CORPORATION
49 Centre Pk., Rochester 3, N. Y.
ALL TYPES OF FILTERS FOR EVERY INDUSTRIAL NEED

▲ For more details circle **NED-632 J3** on enclosed inquiry slip ▲

LOW PRICED

Alligator Shear

Here is a low priced, fast operating "CANTON" Alligator Shear for processing light industrial scrap and for cutting metals. Cuts 2" square bars in mild steel or 3/8" x 24" in plates. Bronze bushed throughout with adjustable knife seat. Gasoline or electric power is optional.

CATALOG N-3 GIVES DETAILS

The HILL ACME CO.
"CANTON" DIVISION 1209 W. 65TH ST., CLEVELAND 2, OHIO

▲ For more details circle **NED-633 J3** on enclosed inquiry slip ▲

Saw Large Holes thru sheet or plate

MARVEL High-Speed-Edge Hole Saws (with high-speed-steel cutting edge integrally welded to tough alloy steel body) provide fast, economical means of sawing out holes from 5/8" to 4½" diameter through steel up to 1⅛" thickness. Extra cutting quality and high-speed-steel self-aligning, double drive pin arbors give strength for use on drill presses, lathes and portable tools, greatly increase the hole size capacity of small tools. Last longer and cut faster with safety.

Write for Hole Saw Catalog Sheets.

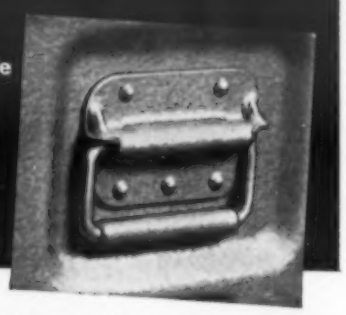
MARVEL *Metal Cutting* **SAWS**
Better Machines-Better Blades

ARMSTRONG-BLUM MFG. CO.
"The Hack Saw People"
5700 Bloomingdale Ave. Chicago 39, U.S.A.

▲ For more details circle **NED-634 J3** on enclosed inquiry slip ▲

Best handle . . . by far!

• Rugged • No Rattle
• Rust-proof
• Built to Military Specifications



Attention manufacturers of portable equipment, carrying cases, parts boxes, etc.! If your product requires side-carry handles, install the best—the Bendix-Friez handle. This superior handle was developed to meet strict military requirements for many specialized equipment uses. Ruggedly built of aluminum and stainless steel in a sturdy design, it knows no equal for long, faithful service. Can be riveted or welded to any kind of container . . . or depressed in the surface, if desired. Unique "snap-back" feature stops rattle from shock and vibration. Prompt attention to both large and small lot orders. Try us today.

Bendix-Friez

FOR FULL DETAILS, WRITE:
FRIEZ INSTRUMENT DIVISION OF Bendix
1344 Taylor Avenue, Baltimore 4, Maryland

Export Sales: Bendix International Division, 205 East 42nd Street, New York 17, N. Y.

For more details circle NED-635 J3 on enclosed inquiry slip

production flows smoothly...
at top speed, at all times, yet free of rejects

Kester makes 62 different fluxes to meet any requirements. Why not write our Technical Department for full information?

KESTER SOLDERING FLUX

KESTER SOLDER COMPANY
4249 Wrightwood Ave., Chicago 39
Newark 5, N. J. • Brantford, Canada

KESTER SOLDER

For more details circle NED-636 J3 on enclosed inquiry slip

Specify **SQUARE D Motor Starters for 3 Important Reasons**

Easy to Wire!
Easy to Get At!
Easy to Live With!

Write for Bulletin 8536. It tells the complete story.
Address Square D Company, 4041 N. Richards St., Milwaukee 12, Wis.

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY

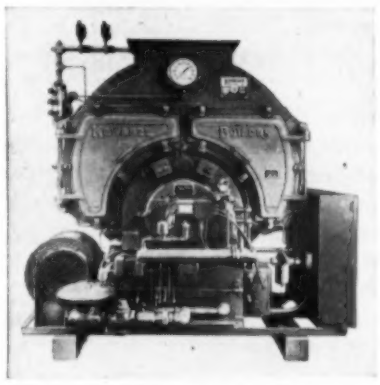
For more details circle NED-637 J3 on enclosed inquiry slip

VAPOR DEGREASER
handles 200 lb per hour

Cool rinse, hot rinse and vapor degreasing are incorporated in the No. 100 CS combination degreasing unit which has a 200 lb per hour capacity. Work can be in baskets or as individual pieces. Distilled solvent is collected by a condensate return trough, passed through a water separator and returned to the rinse sump. Boiling sump is fed by overflow from the rinse sump. Heating is electrical and unit is offered for various current characteristics. Degreaser measures 38 x 18 x 42 in. Made by **Phillips Mfg. Co.**, 3463 W. Touhy Ave., Chicago 45, Ill.

For more details circle NED-638 J3 on enclosed inquiry slip

BOILER-BURNER UNIT
for both oil and gas firing



Top efficiency in all firing ranges using heavy catalytic residual fuel oils as well as light oils and high or low pressure gas is assured by this Kewanee-Ray boiler-burner unit. Unit is made for high pressure steam to produce 39 to 456 output hp at 125 and 150 psi, and for low pressure 15-psi steam or 30 psi water with outputs of 1,313,000 to 15,300,000 Btu hourly. Forced draft operation features multi-stage secondary air control on burner which provides constant velocity type air stream to combustion zone with high turbulence, high turn down ratio and high CO_2 content. Unit was developed jointly with Ray Oil Burner Co. by **Kewanee-Ross Corp.**, 120 Franklin St., Kewanee, Ill.

For more details circle NED-639 J3 on enclosed inquiry slip

Air Valves & Controls

Mechanical Air Controls, Inc.—Solenoid, foot, cam, pilot pressure, hand operated and line mounted valves are described in 32-page illustrated data file No. 53. Units are for pressures between 20 and 150 psi, and each is given full page treatment, with complete specifications, and drawn with parts numbered.

For more details circle NED-640 J3 on enclosed inquiry slip

SAFETY EQUIPMENT FOR ALL INDUSTRIES

IPCO WELDING CURTAINS

A SOUND INVESTMENT FOR PROTECTION OF PERSONNEL

Workers and passers-by are protected from harmful rays given off by welding operations. Also serve as a protective shield against flying chips and scale. Made of special flameproof and waterproof canvas—or asbestos—complete with eyelets for suspending on rod or pipe support.

WRITE FOR BULLETIN NO. 43

IPCO *Safety Equipment for all Industries*
INDUSTRIAL PRODUCTS COMPANY
2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

For more details circle NED-641 J3 on enclosed inquiry slip

DESIGN IDEAS FOR YOU
in every issue of the
"NEOPRENE NOTEBOOK"

New products made of neoprene, Du Pont's versatile chemical rubber.

New engineering developments showing neoprene's wide range of applications.

Performance data proving neoprene's superiority in the field.

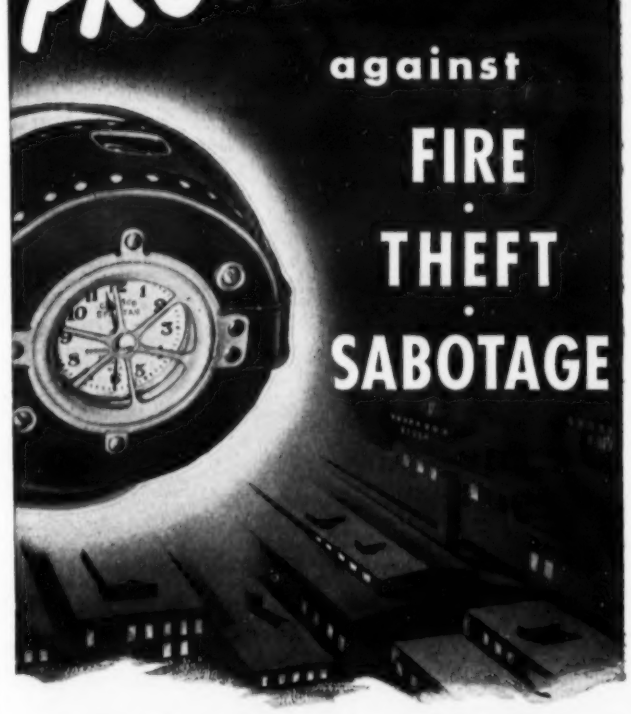
DU PONT
Better Things for Better Living ...through Chemistry

MAIL READER-SERVICE CARD FOR YOUR FREE SUBSCRIPTION

NEOPRENE
The rubber made by Du Pont since 1932

For more details circle NED-642 J3 on enclosed inquiry slip

HERE'S PROTECTION against FIRE • THEFT • SABOTAGE



CHICAGO Watchclock System
"The first . . . and still the first."
LOWERS YOUR INSURANCE RATES!

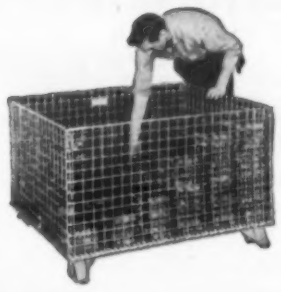
It keeps track of your watchman's tracks—so accurately and positively that the CHICAGO WATCHCLOCK System is approved by THE UNDERWRITERS' LABORATORIES and by THE FACTORY MUTUALS LABORATORIES. Users earn reduced insurance rates. Thus the CHICAGO WATCHCLOCK System quickly returns its small cost to you.

Write for FREE new folder that completely describes this simple, low-cost, tamper-proof system of extra protection to property. Write for it NOW!

CHICAGO WATCHCLOCK
DIV. GREAT LAKES INDUSTRIES, INC.
1522 S. WABASH AVE., CHICAGO 5, ILL.
OFFICES IN PRINCIPAL CITIES

For more details circle NED-643 J3 on enclosed inquiry slip

modernize materials handling with



CARGOTAINERS

Cargotainers are designed to keep pace with modern methods of materials-handling because they are: 1. Sturdy and resistant to shock; 2. Readily folded when not in use; 3. Open mesh so that contents may easily be seen for quick inventory; 4. Efficiently designed for shipment, assembly line use, and vertical storage. Write for information concerning the new CLEARVIEW model with its exclusive base construction for greater durability and better locking and stacking. Dept. NED, Pittsburgh Steel Products Co., Grant Bldg., Pittsburgh 30, Pa.

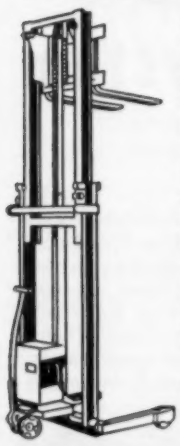
Pittsburgh Steel Products Company
A Subsidiary of Pittsburgh Steel Company

For more details circle NED-644 J3 on enclosed inquiry slip

NOW small warehouses can stack ceiling-high

with the RAYMOND PALLET STACKER

Even the smallest warehouse can store goods ceiling-high with the new RAYMOND Pallet Stacker! This hydraulic truck was designed expressly for firms that have no need for larger, more costly tiering trucks.



The RAYMOND Pallet Stacker handles loads weighing up to 2,000 lbs.—stacks them as high as 115". It's a smooth-rolling highly maneuverable tiering truck that actually right-angle stacks from aisles less than 6 ft. wide.

The Pallet Stacker is equipped with a ¾ HP motor-driven pump that plugs into any 110 V socket. The pump supplies power for raising loads quickly, easily—elevating and lowering controls are conveniently located near the power unit. The hand lowering valve gives you absolute control over the speed of descent.

SEND FOR BULLETIN Get full details on RAYMOND'S new Pallet Stacker — mail coupon for Bulletin 270X today.

The RAYMOND CORPORATION
4118 Madison St., Greene, N.Y.

Please send me Bulletin 270X, describing your new Pallet Stacker.

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

For more details circle NED-645 J3 on enclosed inquiry slip

New Literature and Catalogs

Magnesium Dock Boards

Magline Inc.—Features of the expanded line of light-weight magnesium dockboards, which include built-in safety lock, safety curbs and reinforced curb ends, are pointed up in 4-page illustrated bulletin DB-204R. Pictures show various units in operation.

For more details circle NED-646 J3 on enclosed inquiry slip

Beryllium Products

Beryllium Corp.—20-page illustrated beryllium products directory describes such products as beryllium master alloys, wrought products, casting ingots, forgings and nonsparking safety tools. It also gives technical data on the unusual properties of this metal.

For more details circle NED-647 J3 on enclosed inquiry slip

Gages & Products

DoALL Co.—Booklets "What Users Say About DoALL Gages," and "How DoALL Products are Made, Sold and Serviced" are now available. They are both illustrated and pocket-size, and give a clear picture of the company products and services, the facilities and personnel making and directing them, and the company's customer record.

For more details circle NED-648 J3 on enclosed inquiry slip

Hard-Facing Electrodes

Alloy Rods Co.—12-page illustrated bulletin AR53-20 contains specifications and instructions for use of many types of hard-facing electrodes and rods. Facings built-up are described as corrosion, impact and abrasion resistant. "How to Do It" type copy is included, together with chart giving correct procedure on about 75 common types of hard-facing problems.

For more details circle NED-649 J3 on enclosed inquiry slip

Portable Power Tools

Syntron Co.—Descriptive information and specifications on electromagnetic hammers and hammer drills, portable electric drills, screwdrivers, nutrunners, polishers, sanders and grinders is contained in the well-illustrated 32 pages of catalog 537. Similar information is also included in an electric impact wrench and concrete vibrators and on gasoline hammers for paving breaking and rock drilling.

For more details circle NED-650 J3 on enclosed inquiry slip

Insulated Metal Wall Panels

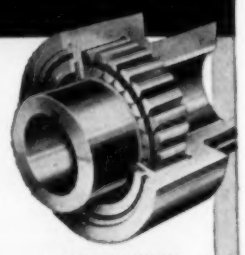
Steelcraft Mfg. Co.—Prepared for architects, engineers and general contractors, 8-page illustrated bulletin gives detailed specification of insulated metal wall panels, with drawings and illustrations. Panels can be ordered in a variety of colors and finishes, are light and easy to handle, and can be used for both interior and exterior building walls.

For more details circle NED-651 J3 on enclosed inquiry slip

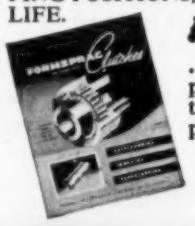
THE FULL COMPLEMENT SPRAG-TYPE CLUTCH

DESIGN ENGINEERS EVERYWHERE ARE SPECIFYING IT

Designers of equipment using over-running clutches are specifying Formsprag Clutches. Because: They've found out what a sprag is . . . What Full Complement means . . . Why that principle provides MAXIMUM TORQUE CAPACITY (for size and weight), INFINITE NUMBER OF GRIPPING POSITIONS, LONGER LIFE.



OVER-RUNNING
INDEXING (Feeding)
BACKSTOPPING



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. . . all the answers on the above plus engineering data, applications, etc. Write for this new 10-page illustrated brochure today.

FORMSPRAG COMPANY
23595 HOOVER ROAD
Van Dyke, Michigan

FULL COMPLEMENT FORMSPRAG Clutches DISTRIBUTORS IN PRINCIPAL CITIES

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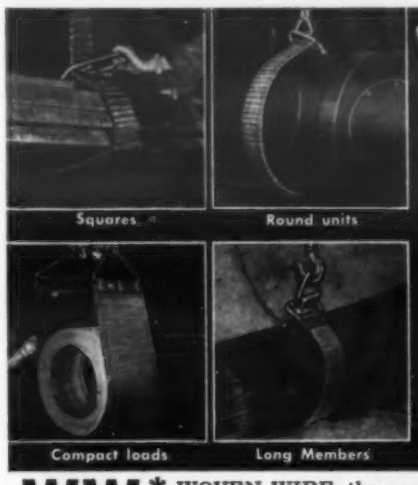

WANTED! TOUGH LIFTING JOBS for Gripper WW*slings

WW* WOVEN WIRE, the newest, most versatile type of sling in the materials handling market. Only Gripper slings are made from WOVEN WIRE.

You can make easy work of the toughest lifting jobs with a Gripper Woven Wire Sling! Its full flexibility gives a tight grip around any shape load, provides stability and safety not obtainable in any other type slings. All metal construction means longest life, freedom from damage even in handling sharp-edged loads such as steel flats and squares. Woven wire construction means no kinking, tangling, sudden breaks in the sling body.

Available in any width or length . . . every Sling pretested to make sure it meets loading specifications.

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DEPARTMENT R
CAMBRIDGE 9, MARYLAND

WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS

See your mill supply, materials handling or safety equipment distributor for full information...or write direct for free illustrated catalog and price list.

Offices in Principal Industrial Cities
Distributors-write for open territory data

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"M" SERIES pilot-operated Skinner Valves have extremely fast action, and large capacity on air, inert gas and liquid applications. All internal metal parts are stainless steel or brass. Soft seals prevent leakage — operate in any position — rubber coated, nylon fabric diaphragm for long life — port size ½" or ⅜", orifice ⅜" — power consumption, 10 watts — continuous duty.

M2 is two-way, normally closed, 5 to 150 p.s.i., weight 3 lbs. M3 is three-way, normally closed, normally open, or directional flow, 20 to 150 p.s.i., weight 3¾ lbs.

Write for Bulletins No. 493 & 494

Skinner ELECTRIC VALVE DIV.
THE SKINNER CHUCK COMPANY
112 Edgewood Avenue, New Britain, Connecticut

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DUPLEX GEARED POWER

Twin Pinions share the load

Most Compact For Extra Low Speeds

TORQUE *is doubled*
LOAD *is equalized*

TYPE GL & GM

U.S. SYNCROGEAR MOTOR

5 to 84 rpm 1 to 25 hp *Request Bulletin*

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BOX 2058, LOS ANGELES 54, CALIFORNIA MILFORD, CONN.

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Left— Union Special Style 20100 H Bag Closing Machine

Here's how to close MULTIWALL PAPER BAGS

FOR lower production costs ...stronger, neater closures ...ability to get out rush orders in a hurry, you can't beat Union Special Bag Closing Machines! Specially built to stand up under heavy production schedules, these machines provide the high output rates needed to meet modern competitive conditions.

In the Union Special line, it's easy to find the right unit to meet your particular requirements. ASK FOR RECOMMENDATIONS.

SEND FOR THIS BULLETIN!

Get your copy of this 16 page illustrated bulletin containing helpful data and charts on the complete Union Special line of bag closing machines. UNION SPECIAL MACHINE CO., 416 North Franklin Street, Chicago 10, Illinois

UNION SPECIAL

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SPARE THE MUSCLES!

LET "George" HAUL TOTE BOXES

This cleverly designed, easy-rolling hand truck supplies the leverage that "goes to bat" for employee muscles. Attached rigid handle hook is engaged with tote box handle. With little effort and by natural leverage, the box glides over bevel edge of truck onto rollers when truck handle is pulled forward. Load is safely held on upper rollers while truck is rolled to destination on lower set of traction rollers.

No dangerous lifting of metal-laden boxes . . . long life . . . low cost. Most plants can use several . . . one company bought 150 units. Get yours!

*TRADEMARK

LET "George" DO IT

Send for Bulletin N

ROLOCK Inc. • Fairfield, Conn.

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New Processes and Materials

PROTECTIVE BAGS guard against corrosion, damage

Metal parts packed in VCI-Lined cushioned bags are not only safeguarded against rusting and corrosion for up to 10 years, but are protected against rough handling, dampness and damage in transit as well. Cushioning is sealed within double walls of moisture-resistant kraft paper. VCI blankets parts with invisible dry protective vapor which penetrates blind holes and cavities often overlooked in greasing. It is nontoxic, nonirritating and nonflammable. Bags can be stamped with dates or other data and may be used in automatic and semiautomatic filling machines to speed packaging. They are available in seven stock sizes. Made by **Jet-Pak, Inc.**, Dept. NED, 859-879 Summer Ave., Newark, N. J.

For more details circle NED-659 J3 on enclosed inquiry slip

WOOD-KRAFT PANELS available in sheet form or for making into boxes and containers

Ply-Veneer is a lightweight product composed of kraft container-board made with Douglas fir chips and fir veneer. Latter is routed for subsequent folding, sandwiched between two sheets of glued containerboard, then cut and shipped flat according to customer specification. Containers of the material are fastened by the customer by taping, banding, stapling or nailing.

Some carton types can have wood end-cleats for greater stability (see photo). Available made to customer order, containers can be printed with customer brand names and trademarks. Tests show that material does not de-laminate with water immersion, nor does it edge-split, rupture or warp. Containers made of it withstand corner drop tests.

Thicknesses of 1/10, ⅛ and 3/16-in. are offered, faced with 42 or 90-lb kraft containerboard, or combination of each. Standard sheet sizes are 4 ft wide and 8, 10 and 12 ft long. Made by **Weyerhaeuser Timber Co.**, Tacoma Bldg., Tacoma 1, Wash.

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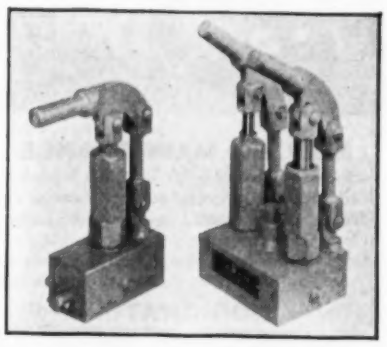
HAND HYDRAULIC PUMP

Single and Double Designs To 20,000 Pounds



Interchangeable Pistons ⅜-½-¾ inch

★

Integral Release Valve

★

Unit Reservoir 360 cu. in.

Pressure range is 3,000 to 20,000 pounds. Pipe connections measure ¼ inch. Handle length is 18 inches. Weight is 8 to 18 pounds. Can be bolted or welded into position. We specialize in hand pump units to operate in temperatures from minus 65 F to plus 160 F and with any capacity reservoirs required.

WILLIAM S. PINE
1635 E. 22nd St., Los Angeles 11, Calif.

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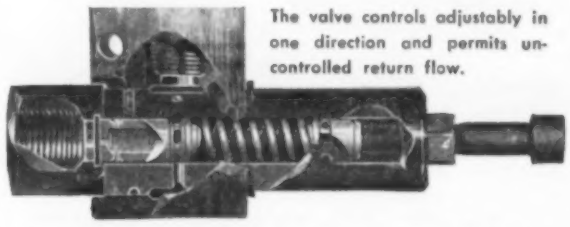
An Adjustable FLOW REGULATOR

This newly perfected adjustable Flow Regulator holds at a constant rate even though the pressure fluctuates.



The valve controls adjustably in one direction and permits uncontrolled return flow.

The spring back piston in the housing is mounted in front of the adjustable screw. It carries a calibrated orifice; operates axially on change in inlet pressure so as to increase the throttling action.

Four sizes, ¼, ⅜, ½, and ¾ inch. Overall length 4½ to 7½ inches. Adjustable over a 50% flow range. Maximum pressure is 3000 pounds.

Write for illustrated circular H

WATERMAN ENGINEERING Company
725 CUSTER AVENUE
EVANSTON, ILLINOIS

For more details circle NED-662 J3 on enclosed inquiry slip

Simple operation beats five o'clock deadline

At the Symington-Gould Corporation, Depew, N. Y., extensive revisions are made on drawings . . . and prints are ready for mailing to customers—hours, even days, ahead of the old schedule.

See how it's done—all so easily—with Kodagraph Repro-Negative Paper . . . another versatile photographic material in the famous Kodagraph line.

1. A basic drawing—which must be revised to meet the individual customer's specifications—is exposed on Kodagraph Repro-Negative Paper in a standard print-making machine; then the print is processed in standard photographic solutions. An easy *roomlight operation* that produces a negative photographic intermediate from the original drawing.

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Symington-Gould also saves time and dollars with Kodagraph Autopositive Paper and Cloth, which are processed in the same easy manner as Repro-Negative Paper, but produce positives *directly* from the originals.

Write for free copy of "Modern Drawing and Document Reproduction." It gives details on the revolutionary Kodagraph line, which you, or your blueprinter, can process . . . quickly, economically.

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EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

Kodak

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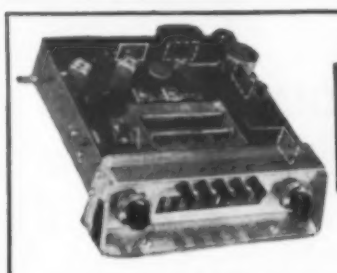

NATIONAL VULCANIZED FIBRE

contributes to an improved product—copper-clad Peerless Capacitors for Bendix Radios

Used by Bendix Radio Division on voice coil circuit and power input leads of automobile radios, capacitors are Peerless Insulation .004 inch thick clad on both sides with .00135 inch copper foil. Minimum capacitance, 200 mmf. Selling for about 7/10 of one cent, capacitors replace types costing five to six. This is typical of the countless contributions National Vulcanized Fibre makes in the production of improved, more economical products.

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NATIONAL VULCANIZED FIBRE — A tough, horn-like material with high dielectric strength. Excellent machinability. Sheets, Rods, Tubes, Special Shapes.

PHENOLITE Laminated PLASTIC — Good electrical insulating material with great mechanical strength; moisture resistant. Sheets, Rods, Tubes, Special Shapes.

NATIONAL VULCANIZED FIBRE CO.
Wilmington, Delaware — Offices in Principal Cities
Since 1873

For more details circle NED-664 J3 on enclosed inquiry slip

Give your appliances this EXTRA VALUE ...at NO extra cost!

MARK-TIME two-speed BELL TIMER

Normally supplied with Center Stud mounting.

The exclusive, patented 2-speed feature of this Mark-Time unit makes it TWO timers in one! . . . and puts more "sell" into your appliances!

Here's why: in the long-time position, the user can measure time up to ONE HOUR for baking, roasting, stewing and other lengthy cooking operations . . . can use it as a reminder for appointments and other household jobs, too! By moving the lever to the short-time position, the user can obtain settings within seconds for boiling eggs, pressure cooking . . . precise timing for all short time jobs up to SIX MINUTES, where even fractions of a minute are important.

At the end of the pre-set time period, in either long or short range, this timer gives a clear, resonant bell signal.

Available with a wide variety of modern dials and knobs; also in 2-hour, 12-minute range.

Write today for full details and prices.

MARK-TIME
M. H. RHODES, INC.
HARTFORD, CONNECTICUT

Manufactured and sold in Canada by
SPERRY GYROSCOPE OTTAWA, Limited
3 Hamilton St., Ottawa, Ontario, Canada

For more details circle NED-665 J3 on enclosed inquiry slip

New Literature & Catalogs

Water, Heat & Refrigerant Coils

United States Air Conditioning Corp.—Series of four 2-page illustrated technical bulletins describe usAIRco water, blast heat, refrigerant and steam distributing coils. Each type is made in various pipe tapping arrangements, sizes, widths and tube lengths.

For more details circle NED-666 J3 on enclosed inquiry slip

Oiltight Pushbuttons

General Electric Co.—Over 35 photos and drawings are used in 8-page bulletin GEA-5779 to illustrate the flexiblity, maintenance and various types of units available in a line of oiltight pushbuttons. They feature color ring identification and building-block combinations. Ratings and dimensions are given.

For more details circle NED-667 J3 on enclosed inquiry slip

Wooden Container Facts

American Box Co.—Practically everything users of containers should know about nailed wood boxes ranging from product analysis to a glossary of box terms are given in 4-page illustrated bulletin.

For more details circle NED-668 J3 on enclosed inquiry slip

Open-Back Inclinable Presses

Niagara Machine & Tool Works—A complete line of open-back inclinable presses which are equipped with mechanical sleeve clutches and range in capacity from 32 to 222 tons is detailed in 24-page illustrated bulletin 58-L.

For more details circle NED-669 J3 on enclosed inquiry slip

Steel Fabrication Facilities

J. T. Edwards Co.—Plant facilities, finished jobs and details of services available for the fabrication of steel for bridges, railings, stairs and a wide range of ornamental, structural and industrial needs are covered by 12-page illustrated catalog "The Custom Fabrication of Steel."

For more details circle NED-670 J3 on enclosed inquiry slip

Remote Controls

Stow Mfg. Co.—16-page illustrated bulletin 528 is a design manual covering the application of flexible shafting to valve remote control systems. Details of typical systems as well as flexible shaft units, couplings, clamps and accessories are given. Design, selection, engineering and application data are included.

For more details circle NED-671 J3 on enclosed inquiry slip

Grinding & Mixing Equipment

U. S. Stoneware Co.—Get illustrated bulletin 270 of 20 pages and you'll get detailed technical data on standard line of mixing and grinding equipment, plus information on new Roalox-Burundum-fortified mill jars with a body that lasts two to three times longer than conventional mill jars. Photos, technical data and charts are included for the various types of equipment covered.

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Select pressure — get uniform, constant hydraulic control with "FULFLO" (TRADE MARK, REG. U.S. PAT. OFF.)

OIL BY-PASS RELIEF VALVES — Standard or Flange Types

NEED NO MAINTENANCE
Precision-engineered to maintain predetermined pressures on ram presses, machine tool hydraulic mechanisms, Diesels and oil-burning equipment.
Trouble-free because built with fewest parts for dependable, quiet, constant performance.

NON-CHATTERING
BRASS OR CAST IRON . . . for pressures from 5 to 500#. Pipe sizes: ¼" to 2"

Write Today for personal copy FULFLO MECHANICAL DATA BOOK.
State if for Valves . . . for Pumps . . . or for both.

FULFLO — THE FULFLO SPECIALTIES CO. Inc.
BLANCHESTER, OHIO

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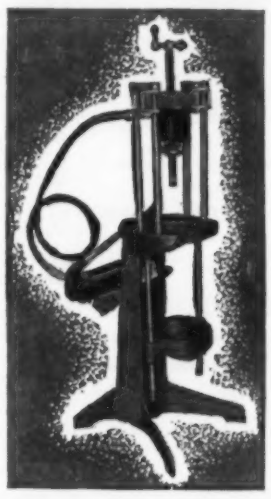
OTC 17½ TON HYDRAULIC OPEN THROAT PORTABLE PEDESTAL PRESS

ONLY $199.95
SAVES HOURS AND DOLLARS ON EVERY JOB



An unbelievable low price for this amazingly efficient Portable Pedestal Press and 17½ ton Power-Twin Hydraulic Puller . . . a must for every maintenance shop. Pays for itself on the first few jobs in time, tools and money saved.

Use it for pressing bearings, bushings, pins, for bending, straightening, compressing, spreading, etc. Move it where you want it—it's portable.

STRONG . . . will handle 95% of all pulling or installing jobs.

COMPACT . . . Base is only 20" x 21" . . . 34¼" from top of press plate to floor. Press Plate throat is 7½" deep, 6" wide, 10½" clearance between uprights; 1" from Ram to press plate with almost unlimited vertical adjustment. Weighs less than 200 lbs.

VERSATILE . . . POWER-TWIN Hydraulic Unit may easily and quickly be detached for field service or other pulling jobs.

INEXPENSIVE . . . dollar for dollar . . . ton for ton . . . the lowest priced, most rugged and efficient Hydraulic Press on the market.

See your jobber for complete information or write us.

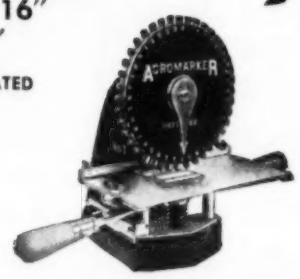
OWATONNA TOOL CO.
436 CEDAR STREET • OWATONNA, MINNESOTA

For more details circle NED-674 J3 on enclosed inquiry slip

ACROMARK MEANS "ACCURATE MARKING"

THE ACROMARKER NAME PLATE AND PARTS STAMPING MACHINE COMES IN SIZES FROM 1/16" TO 3/16"

HAND OPERATED AND FOOT MODELS



NON-TIRING FAST-MAKES PERFECT STAMPING OF LETTERING & NUMBERING EASY AS DRIVING A CAR

DIE WHEELS AND DIES ARE REPLACEABLE.

The ACROMARK Company
7-11 MORRELL ST., ELIZABETH 4, N. J.
"THE ORIGINAL MARKING SPECIALISTS"

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LAWLOR MOP WRINGERS

FOR EASIER MOPPING GET A LAWLOR NO. 2

Copied but never Duplicated!

EASIEST turning wringer made: there are bearings at ends of rollers.

EASY to brings rolls together: foot lever is perfectly balanced.

EASY to move wringer: self-adjusting front casters raise metal feet from floor when you're ready to go.

The LAWLOR No. 2 accommodates any standard round, galvanized pail up to 16-quart capacity. Net weight of wringer—23 pounds.

LAWLOR No. 6 TWIN is like the No. 2 Wringer in general construction, but accommodates two pails.

Write for Catalog of Mop Wringers, Tanks, Cleaning Equipment for every kind and size floor.

S. C. LAWLOR CO.
Quality Floor Equipment for 50 Years
131 N. ABERDEEN ST. CHICAGO 7, ILL.

For more details circle NED-676 J3 on enclosed inquiry slip

Drill Hardened Steels without Annealing—

With the new, improved "HARDSTEEL" Drill, you can do accurate, smooth drilling, countersinking, counterboring and reaming in steels hardened by any process without first annealing the work. And they work with equal ease on work-hardening steels and high carbon—high chrome steels of any degree of hardness.

"HARDSTEEL" Drills fit standard drill presses. They save time and reduce rejects. They permit engineering changes requiring additional drilling after hardening. And parts drilled after hardening always match at assembly.

Write for a copy of the "HARDSTEEL" Operators Manual showing how "HARDSTEEL" drills are cutting costs in thousands of plants.

You Harden It—We'll Drill It—With "HARDSTEEL"

BLACK DRILL COMPANY, INC.
1380 East 222nd St. • Cleveland 17, Ohio

Also makers of— BLACK DRILLING UNITS—AUTOMATIC, SELF-CONTAINED—FOR COST-CUTTING PRODUCTION ON ALL MATERIALS *Write for information*

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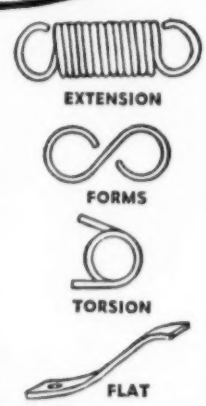
QUALITY CONSCIOUS SPRING BUYERS CHOOSE

PARAGON SPRINGS

Springs from Paragon are good springs . . . because of our complete control during manufacture. Our customers know that even commercial springs are better from Paragon . . . at no extra cost. Whatever your requirements . . . Precision or Commercial . . . your orders and inquiries receive expert individual attention.



SEND SPECS FOR QUOTATION

Write for STOCK SPRING DATA SHEETS giving complete specs, loading and design information.

PARAGON SPRING COMPANY
4619 W. Fulton St. • Chicago 44, Ill.

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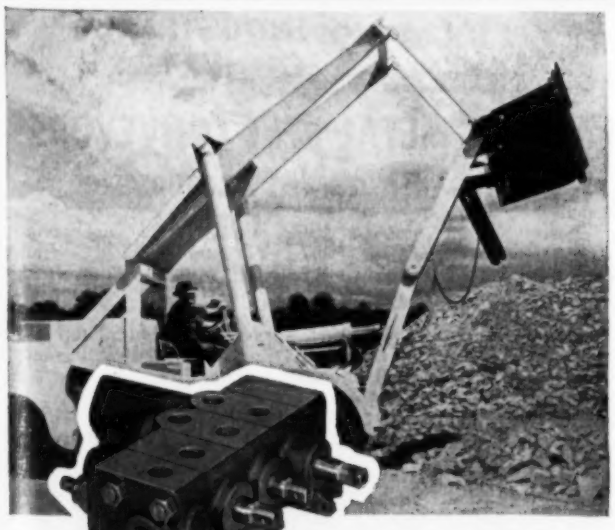


VALVES.
Unit-Tandem
1/2"-3/4"-1"
Spring return
Poppet Detents

COMMERCIAL HYDRAULIC OIL
Fluid Power Controls

are REDUCING COSTS and INCREASING PRODUCTIVITY for the earth moving industry.

FOR COMPLETE DETAILS ASK FOR YOUR COPY OF CATALOG H-7

THE "COMMERCIAL" SHEARING AND STAMPING COMPANY
YOUNGSTOWN, OHIO · CHICAGO, ILL. · SALT LAKE CITY, UTAH

For more details circle NED-679 J3 on enclosed inquiry slip

New Processes & Materials

PLASTIC SPRAY COATING protects overseas shipments

Conforming to specification MIL-B-12121, this cocoon type plastic spray coating protects military vehicles in processing for overseas shipment. Though the plastic is easily removed by stripping, it does not have to be removed from tires and seat fabrics when the vehicle is in service. In these instances it is retained as permanent protection. It is supplied in olive drab, strato blue and service yellow to match vehicle colors, and is waterproof and prevents oxidation. Made by **R. M. Hollingshead Corp.,** 870 Cooper St., Camden 2, N. J.

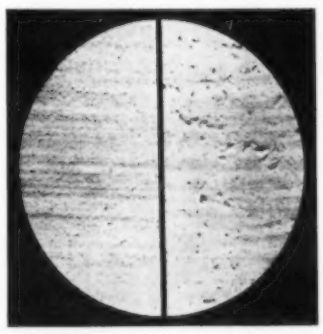
For more details circle NED-680 J3 on enclosed inquiry slip

TITANIUM STRIP rolled down to 0.0005-in. thick

Commercially pure titanium with high corrosion and temperature resistance characteristics is now available in strip up to 8 in. wide and down to 0.0005-in. thick, with tolerances as close as plus-minus 0.0001-in. Strip can be furnished in any quantity from one to thousands of pounds. Final slitting is performed by precision gang slitters. Made by **American Silver Co.,** Industrial Div., Dept. NED, 36-07 Prince St., Flushing 54, N. Y.

For more details circle NED-681 J3 on enclosed inquiry slip

LATEX BASE PAINT single coat gives flat seal



Formulated for maintenance engineers and professional painters, Professional Ultra Flat latex paint has good covering and sealing qualities and gives a flat finish with any standard method of application. It is noncombustible and nonodorous and resists the action of plaster carried lime salts. Microphotograph shows (left) flat finish left by paint on wallboard used in drywall construction and (right) uneven nap resulting from application of a standard flat primer to same material. Paint is packaged in 1 and 5-gallon cans, and is available in white and ten colors. Made by **Glidden Co.,** Berea & Madison Ave., Cleveland 2, O.

For more details circle NED-682 J3 on enclosed inquiry slip

— and now TAPER-LOCK SPROCKETS

New "off-the-shelf" availability is now brought to roller chain drives. Taper-Lock bushings are available in sizes for most needs—no more boring sprockets to fit shafts. No turning and grinding of shaft necessary—Taper-Lock grips with firmness of a shrunk-on fit. Dodge roller chain is made to highest quality standards.

Complete range of B-type steel sprockets and roller chain available from stock — 1/2" to 1 1/4" pitch. For details write for Bulletin A-624.

DODGE MFG. CORPORATION
2100 Union Street, Mishawaka, Ind.

— and Dodge Roller Chain

DODGE
of Mishawaka, Ind.

For more details circle NED-683 J3 on enclosed inquiry slip

ONLY MOBILIFT STAND-UP FORK LIFT TRUCKS

Give You

LEV-R-MATIC DRIVE
- No Gears to Shift.
- Speeds All Movements.

MOBILIFT MOBILITY
- 360° Steering—ZERO Inner Turning Radius
- Excels in Close Quarters

MOBILIFT STAND-UPS
- Ample size platform.
- On and Off in Seconds.
- All Around Visibility.

To these *plus* advantages add MOBILIFT air-cooled 3-cylinder engine's reliable power and easy accessibility for minimum service and repair.. The answer is obvious:

You'll Accomplish More... Work Faster... Earn More with MOBILIFT Fork Lift Trucks. *Write for full information.*

MOBILIFT CORPORATION MOBILIFT Lev-R-Matic DRIVE
835 S. E Main St., Portland 14, Oregon
2317 W. 18th, CHICAGO • 790 Patterson Ave., E. RUTHERFORD, N. J.
2724 Taylor St., DALLAS • 113 Spring St. N. W., ATLANTA
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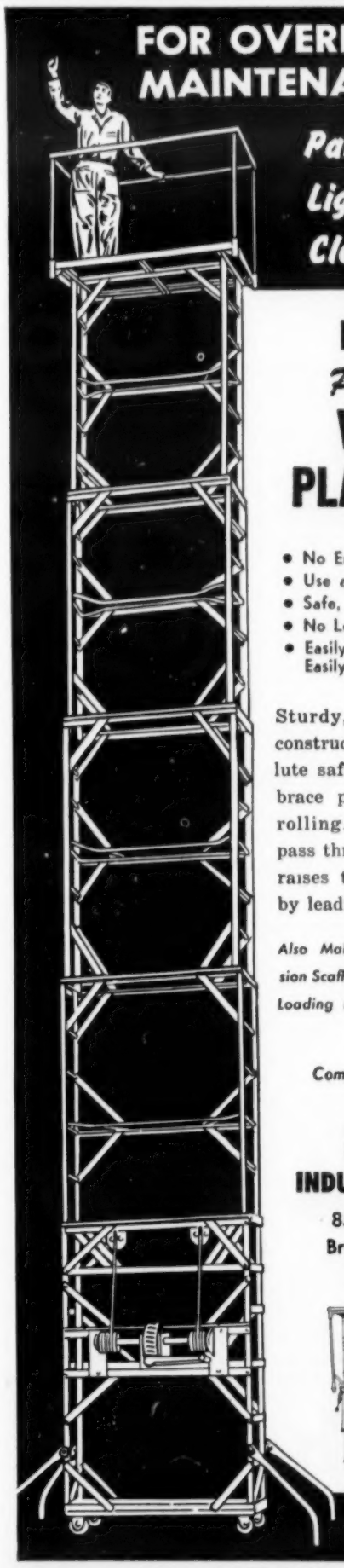
FOR OVERHEAD MAINTENANCE . . .

Painting . . .
Lighting . . .
Cleaning . . .



HI-LIFT
Portable
WORK PLATFORM

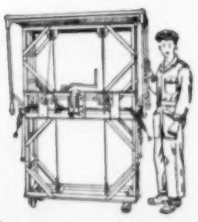
- No Erection Required
- Use at Any Height
- Safe, Sturdy, Dependable
- No Loose Parts
- Easily Rolled . . . Easily Raised

Sturdy, all welded steel construction means absolute safety . . . outrigger brace prevents tilting or rolling. Small enough to pass through doorway, yet raises to 20 ft. Endorsed by leading concerns.

Also Makers of HI-LIFT Extension Scaffold and ATLAS Portable Loading Platform

Write for Complete Information

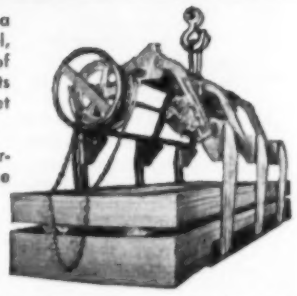
ATLAS INDUSTRIAL CORP.
853 - 39th Street
Brooklyn 32, N. Y.



For more details circle NED-685 J3 on enclosed inquiry slip

Wide or Narrow...

1 C-F LIFTER HANDLES THEM ALL



Whether your production requires a few or many widths of sheet steel, 1 C-F Lifter, with its wide range of jaw and carrying angle adjustments will probably meet all your sheet handling requirements.

Adjustments are made by the operator in a few seconds, permitting the Lifter to shift from wide to narrow sizes almost instantly.

Because it can pick up, carry and unload more loads per hour, using less man and crane time than any other methods, a C-F Lifter will soon pay for itself.

Bulletin SL-25 gives you the complete story of C-F Lifter advantages to you. Ask for it today. There is no obligation.

CULLEN-FRIESTEDT CO.
1304 South Kilbourn Avenue • Chicago 23, Illinois

For more details circle NED-686 J3 on enclosed inquiry slip

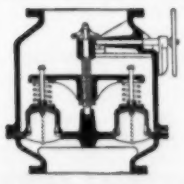
MULTIPLE DISC DESIGN
VAPOR-CUSHIONED ACTION
EASILY ADJUSTABLE

cochrane MULTIPORT VALVE

Saves Steam • Cuts Maintenance • Gives Maximum Protection to Steam Systems

Designed for smooth, positive operation at all times, Cochrane Multiport Valves regulate line overpressure—keep back pressures within upper pressure-temperature limits... automatically!

No Freezing, Jamming, Sticking Multiple Discs (3 to 16 per valve) eliminate valve failure.



No Blowdown, Vibration or Wasted Steam Vapor-Cushioned valves ride with overpressure to iron-out fluctuations or pulsations . . . open s-l-o-w-l-y to bleed-off *only* excess pressure, ease closed to tight reseat *exactly at set pressure.*

Fully Adjustable Back pressure adjustment at the turn of a wheel. Valve springs are adjustable from zero to the maximum initial relief pressure you specify. Valves can't be "gagged" or "locked-shut".

Precision machined from non-rust, corrosion-resistant materials to give long service under toughest wear conditions.

Unfailing Operation Guaranteed

Write today for your free copy of our new Multiport Valve Catalog. It contains detailed information on uses, applications and sizing data.

cochrane corporation
3143 N. 17th Street, Philadelphia 32, Pa.

For more details circle NED-687 J3 on enclosed inquiry slip

New Literature & Catalogs

Electronic Instrument Tools

United Catalog Publishers, Inc.—Wide assortment of tools for the repair and maintenance of radio, television and electronic equipment is found in the 36-pages of the illustrated "Handi-Guide." Specifications, illustrations, technical data and prices on tools of 17 manufacturers are included.

For more details circle NED-688 J3 on enclosed inquiry slip

Loose-Leaf Binders

Remington Rand Inc.—Over 20 loose-leaf binders are described and illustrated in 40-page booklet "Binders that Build Business." Sheet changes are facilitated by improved locking and unlocking mechanism. A printing and embossing process personalizes each binder.

For more details circle NED-689 J3 on enclosed inquiry slip

Internal Downflow Purifier

V. D. Anderson Co.—Selection tables to guide the user in specifying internal downflow Hi-eF purifiers for any steam, air, gas or vapor installation are found in bulletin 401 of 4 pages. Advantages and uses, applications and a table of dimensions and weights are included.

For more details circle NED-690 J3 on enclosed inquiry slip

Gage Do's & Don't's

Size Control Co.—"Make Gages Last Longer!" states this instruction sheet which relates do's and don'ts pertaining to use of reversible thread and plug gages of go-no-go type. It is printed on heavy stock for posting in inspection department or laboratory.

For more details circle NED-691 J3 on enclosed inquiry slip

Quick-Connect Couplers

Snap-Tite, Inc.—Air, water, oil, gas, steam and most chemicals can be handled by the Hi Flow line of quick-connect, quick-disconnect full swivel couplers described and illustrated in 8-page catalog VP 83. They are made in sizes from 1/8 to 3 in. and are cadmium plated.

For more details circle NED-692 J3 on enclosed inquiry slip

Wire Rope Fittings

Sauerman Bros., Inc.—Blueprint drawings, tables and ordering information on open and double wedge sockets, pins and continuous cable clamps are found in 6-page folder for users of wire rope fittings. Pictures of various applications are shown.

For more details circle NED-693 J3 on enclosed inquiry slip

Transformers, Reactors, Filters

United Transformer Co.—24-page illustrated catalog 530 contains general data and specifications on line of transformers for broadcast, laboratory and replacement purposes, plus data on amplifier kits, toroid inductors, various filters and other equipment.

For more details circle NED-694 J3 on enclosed inquiry slip

If the equipment you design calls for 29.9" of vacuum or 25 psi pressure

Wings in this Leiman Pump take up their own wear, year after year, and always maintain contact with cylinder wall. *See our Listing in Sweet's Product Design File*

Write for 16-page catalog and blueprints of typical applications on Leiman rotary positive pumps—choice of industry since 1889.

LEIMAN BROS., INC.
167 Christie Street, Newark 5, N. J.

For more details circle NED-695 J3 on enclosed inquiry slip

It will pay you to consider

"SUPER-SOAK" PARTS WASHERS

Simple—Practical.

Based on an old, proved principle.

No pumps, sprays, and no handwork.

For the removal of foreign substances, oils, grease, chips, etc., from metal parts.

A very satisfactory "job" at a low cost.

Please write for detail Circular.

THE SUPER-SOAK COMPANY, INC.
3770 South Pennsylvania Ave., Milwaukee 7, Wis.
Good Sales-territory still open.

For more details circle NED-696 J3 on enclosed inquiry slip

NEW DISC CLUTCH

for gasoline engines, electric motors, speed reducers, etc.

operates with light pressure
picks up load without grab

integral V-belt pulley

integral sprocket

cut-off coupling or sleeve

easy manual operation

adjustable

powerful

For stub or through shaft application, these new Type K clutches—rated up to .8 HP at 100 rpm—have generous safety factors throughout to stand severest service. Threaded steel adjuster permits precise easy adjustments to assure maximum capacity and minimum engaging pressure. Clutch locks itself in engaged position.

Write for new descriptive Bulletin K-1, including complete specifications.

THE EDGEMONT MACHINE CO.
2200 HOME AVENUE • DAYTON 1, OHIO

For more details circle NED-697 J3 on enclosed inquiry slip

Sheehan's INDUSTRIAL CONVEYORS

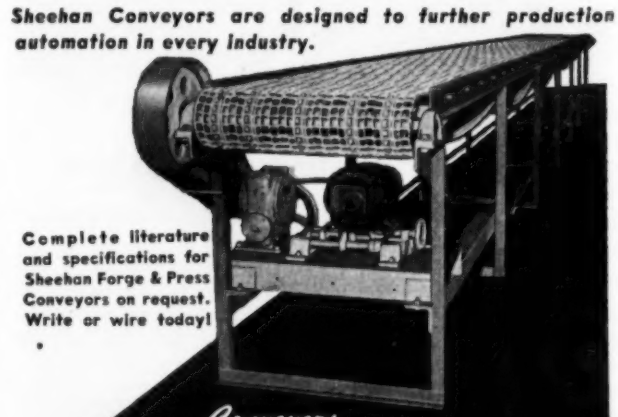
FLAT TOP METAL BELT CONVEYORS

Versatile Durable Economical

Sheehan Flat Top Conveyors are being used to speed production parts through infra-red ovens, washing and degreasing operations. They are being used by food packing, metal working and many other industries in indoor installations and out of doors.

Metal belts of galvanized steel, electro-cadmium plated or stainless steel, driven by Sheehan Positive Drive Belt Sprocket assure production under many difficult conditions.

Sheehan Conveyors are designed to further production automation in every Industry.



Complete literature and specifications for Sheehan Forge & Press Conveyors on request. Write or wire today!

Conveyors
R. T. SHEEHAN CO. PLYMOUTH, MICH.

For more details circle NED-698 J3 on enclosed inquiry slip

It Pays to Modernize—

Get Low Cost Dust Protection With

TORIT DUST COLLECTORS

Everywhere, cost conscious plant managers are modernizing production set ups with Torit Dust Collectors for, in addition to their known efficiency, they produce savings all along the line. Among these are:

- Low investment and installation expense.
- Minimum piping for less friction loss.
- Can be wired to eliminate idle operation.
- Cleaned air recirculated—no heat losses.
- Self-contained they occupy little space.
- Easy to re-install in new locations.
- Wide selection of stock models.

Torit Door Fasteners

The sturdy and efficient door fastener used on Torit cabinets is available for use on your own products. Strike plate either flat or angular. Write for quantity prices.

see our catalog in MACHINE TOOL CATALOGS or write for copy

Join this modernization parade by increasing your plant's efficiency with Torit Dust Collectors. For complete information write:

TORIT MANUFACTURING CO.
298 Walnut Street St. Paul 2, Minn.

For more details circle NED-699 J3 on enclosed inquiry slip

WON'T SMUDGE • RESISTS: DIRT GREASE WATER ACIDS

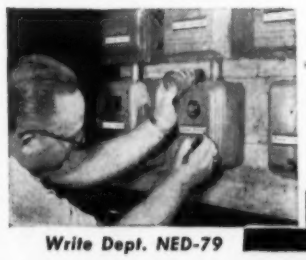
LABELON PLASTIC *Write on it* **TAPE**

STICKS WITHOUT MOISTENING

FOR TESTING, DEVELOPMENT, INVENTORY, MAINTENANCE, ETC.

Nothing else like LABELON—the amazing "Write on it" plastic tape! Use it to label stockroom shelves, bins, tools, hard-to-mark parts; for indicating rejects and service department repairs; for marking laboratory equipment, supplies, experiments; for panel boards or wiring; for office files, folders, etc.

LABELON TAPE sticks without moistening to any smooth, clean surface—yet can be quickly removed. Resists heat up to 160°. Just write on it with pencil or stylus—message won't smudge. Choice of widths and colors. Handy dispenser with cutter bar. *See your nearest dealer, or write for sample and prices.*



Write Dept. NED-79

LABELON TAPE CO., INC.
450 Atlantic Ave., Rochester 9, N. Y.

For more details circle NED-700 J3 on enclosed inquiry slip

UNIVERSAL CHUCKS

save time . . .

save money . . .

- low first cost, due to simple design.
- wrap-around gripping action eliminates scored tool shanks.
- precision manufacturing assures tools running true.
- sizes from 1/16" to 1½", shanks to fit any type machine.

Standard Collet Chucks for a wide variety of applications.

Floating Chucks for reaming and tapping.

Coolant-Fed Chucks for deep hole drilling.

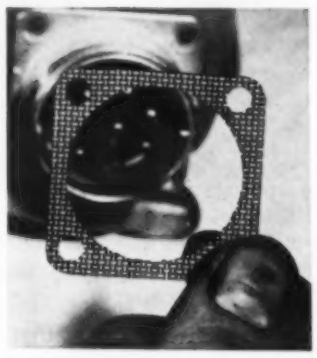
UNIVERSAL ENGINEERING COMPANY
FRANKENMUTH 5, MICHIGAN

173-A

For more details circle NED-701 J3 on enclosed inquiry slip

New Processes & Materials

RADIO-SHIELDING GASKET incorporates aluminum screening



Highly conductive to electricity, gasketing material composed of DuPont Neoprene filled aluminum wire screening is available for shielding radio, TV, radar and electronic equipment. Both surfaces are buffed to uniform gage and smoothness, and to expose aluminum wire so that it will make good contact with flanges. Featuring high conductivity, dimensional stability and resistance to deterioration, gasketing is supplied in diecut form or as uncut sheets measuring 15 x 19 in. and 0.02-in. thick. Made by **Vulcanized Rubber & Plastics Co.**, 263 Fifth Ave., New York 16, N. Y.

For more details circle NED-702 J3 on enclosed inquiry slip

METAL CLEANING COMPOUND for vitreous enameling industry

Described as a medium-high alkaline compound with high wetting and penetrating properties, Detrex 63 metal cleaner is specially developed for use in the vitreous enameling industry. It will emulsify large quantities of mineral oils and greases and keep them in suspension, and cleans work leaving no trace of soil. Other properties include long life, sludge prevention and low surface tension for easy rinsing. Compound is effective with either soft or hard water solutions. Made by **Detrex Corp.**, P. O. Box 501-N, Detroit 32, Mich.

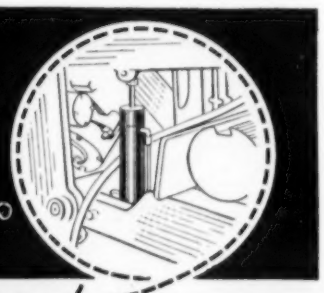
For more details circle NED-703 J3 on enclosed inquiry slip

STAINLESS STEEL FLUX facilitates soldering alloy steel

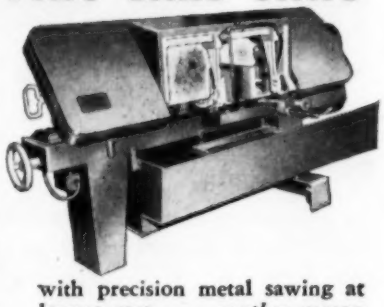
Usable on stainless steel, Monel, Inconel, Nichrome, chromium, manganese, tungsten and vanadium alloys, Stainless Steel 48 soldering flux removes oxides without affecting the corrosion resistance or other properties of the metal. It helps solder flow at lowest possible temperatures and penetrates joints and seams. Flux residue is removable with water. Flux can be used with solder iron, flame or dip soldering methods. Made by **Remont Mfg. Co.**, 1001 Thirteenth St., Lombard, Ill.

For more details circle NED-704 J3 on enclosed inquiry slip

You can **CUT THIN WALL SECTIONS BETTER**



with *Kalamazoo* **METAL CUTTING BAND SAWS**



Why? Because Kalamazoo's hydraulic frame control is coordinated with the feed control to give just the right blade pressure for smoothest, most accurate cutting of tubing and thin wall sections. In addition, the saw frame cannot drop accidentally and damage material or saw blade. Yes . . . here's *another* reason why Kalamazoo is synonomous with precision metal sawing at lowest cost . . . *another* reason why it will pay you to specify Kalamazoo Metal Cutting Band Saws. Three models, all available with coolant system and casters.

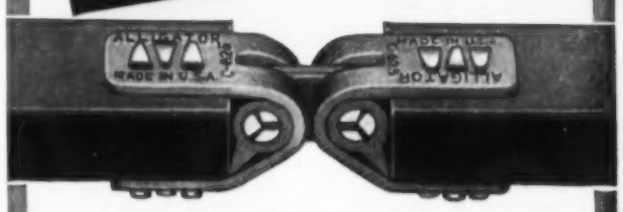
MACHINE TOOL DIVISION

Kalamazoo **TANK and SILO CO.**
912 HARRISON ST., KALAMAZOO, MICHIGAN

For more details circle NED-705 J3 on enclosed inquiry slip

Now you can fasten V-belts by using

ALLIGATOR V-BELT FASTENERS



- Alligator V-Belt Fasteners and open-end (long length) V-belting in rolls will enable you to make up multiple V-belt drives for a wide variety of applications.

Available for B, C and D sizes of V-belting.
Not to be used for repairing endless cord V-belts.
Bulletin V-211 will give you complete details.
A copy mailed on request.

Order from your supply house

FLEXIBLE STEEL LACING COMPANY
4664 Lexington St., Chicago 44, Illinois

Also sole manufacturers of Alligator Steel Belt Lacing for flat conveyor and transmission belts and FLEXCO Belt Fasteners and Rip Plates for fastening and repairing conveyor belts.

For more details circle NED-706 J3 on enclosed inquiry slip

Have You Explored All the Ways To Save Money With a Fork Truck?

WOULDN'T IT BE GOOD BUSINESS to know all the ways to save money with your Clark truck? It's the function of Clark attachments to transform your truck into a machine of *many* uses. Rather than let a truck stand idle for "lack of work," you can switch from one attachment to another in 10-20 minutes—go from one job to another, from partial idleness to *full-time* usefulness.

For example, why use manual labor to handle scrap, coal, sand or even cement? You'll do the job faster, more economically with one of Clark's shovel attachments. Why manhandle cartons, crates, rolls, drums, bales? Simply switch to the proper Clark attachment—there's one designed to handle practically any product or material. And for the relatively few cases where a standard attachment won't do the job, it's more than likely that our Custom Truck Department can design and build special equipment to solve the problem (—and inquiries are invited).

Your local Clark dealer (listed in the Yellow Pages of your phone book) will be glad to help you plan ways to multiply the usefulness of your Clark trucks and POWR-WORKER hand trucks. Or if you prefer to use the coupon, we'll gladly send a brochure describing the Clark line of attachments.

1903 1953 FIFTY YEARS CLARK EQUIPMENT

CLARK ELECTRIC, GAS, DIESEL, L.P. GAS FORK TRUCKS
AND POWERED HAND TRUCKS • INDUSTRIAL TOWING TRACTORS

INDUSTRIAL TRUCK DIVISION • CLARK EQUIPMENT COMPANY • BATTLE CREEK 21, MICHIGAN
Please send: ☐ Attachments Catalog ☐ Driver Training Movie ☐ Have representative call

Name_____
Firm Name_____
Street_____
City_____ Zone____ State____

AUTHORIZED CLARK INDUSTRIAL TRUCK PARTS AND SERVICE STATIONS IN STRATEGIC LOCATIONS

For more details circle NED-707 J3 on enclosed inquiry slip

NEW
Magnetic
SUPER-SWEEPER

Removes Chips, Bolts, Nails From Factory Aisles, Drives, etc.

Eriez new Super-Sweeper is the most powerful, economical permanent non-electric magnetic sweeper ever designed to pick up and hold dangerous shavings, chips, nuts, bolts and other tramp iron from factory aisles, parking lots, shipping areas, etc. Super-Sweeper helps to keep floors clean and safe . . . reduces accidents . . . prevents tire blowouts!

PULL IT . . . Super-Sweeper's double steel tube handle with looped end easily hitches to any vehicle. *PUSH IT* . . . Super-Sweeper is powerful . . . light weight . . . easily maneuvered around machines, aisles, etc. *SUSPEND IT* . . . Super-Sweeper is adapted for industrial and fork lift trucks . . just remove wheels and handle, attach with built-in eyebolts.

Low cost Eriez Super-Sweeper is quickly cleaned by stripping the tramp iron accumulation from the sturdy canvas cover stretched over magnetic face.

Four sizes (from 35½" to 71½" wide) in three magnetic strengths for medium, heavy and extra heavy-duty tramp iron removal are available for manual or mechanical operation . . . at amazingly low cost.

Write TODAY for *new* brochure on Eriez permanent Super-Sweeper. It fully describes this new low cost sweeper . . . includes specs and prices.

ERIEZ MANUFACTURING CO.
40 MAGNET DRIVE, ERIE, PENNSYLVANIA

For more details circle NED-708 J3 on enclosed inquiry slip

more advantages than any other heating method for FORGING • EXTRUSION • ANNEALING

Here are the outstanding advantages . .

Taper heat control; one-fifth the floor space; no warm-up time; exact temperature (measured) of every billet; completely automatic. Size range begins at 4" steel bars—1⅛" in aluminum and 3" with brass. Maximum almost unlimited—now up to billets of 32" diameter and 6,000 pounds.

If you want prompt and authentic information on a Magnethermic Heater, let us know what size billet; for what use; and, desired production rate. Your inquiry will receive prompt attention.

THIS BOOKLET MAY END A LOT OF YOUR HEATING PROBLEMS

The bulletin has sizes, styles, descriptions and other useful information. A copy will be mailed promptly upon request.

60-CYCLE
MAGNETHERMIC corporation
3990 SIMON ROAD YOUNGSTOWN 7, OHIO
INDUCTION HEATING

For more details circle NED-709 J3 on enclosed inquiry slip

New Literature & Catalogs

Electrical Fittings

Buchanan Electrical Products Corp.—Line of solderless wire connectors and specialized electrical fittings is described, and illustrated as well, in the 16-pages of catalog No. 53. Included are pres-SURE-connectors for solderless wire splicing and terminating, Snap-Action plugs for temporary or permanent plugging of knockout holes and heavy duty molded terminal blocks. Specifications, dimensional data and application instructions are included.

For more details circle NED-710 J3 on enclosed inquiry slip

Washing & Finishing Machines

Industrial Washing Machine Corp.—Overhead monorail, conveyor or cabinet type, rotary drum and vertical type industrial washing and metal finishing machines are described in illustrated catalog. They are adaptable to washing, rinsing, phosphate coating, pickling, treating with Bonderite, drying or any combination of these processes.

For more details circle NED-711 J3 on enclosed inquiry slip

Packings & Gaskets

New York Belting & Packing Co.—Not only a catalog, but also a product manual which contains information on the care, use and maintenance of rod and sheet packings and gaskets, is 40-page illustrated form NY-2697-P. Engineering section has necessary charts and tables for determining working specifications of packings. Specifications of each type are given.

For more details circle NED-712 J3 on enclosed inquiry slip

Washers & Metal Stampings

Quadriga Mfg. Co.—Specifications for tension, friction and finishing washers, wire terminals, blanking dies, dished blanks, standard gages, general stampings, and progressive and compound dies are found in 16-page illustrated form 865. Company has press capacity of up to 150 tons with depth of draw to 4 in.

For more details circle NED-713 J3 on enclosed inquiry slip

Welding Preheat Calculator

Using slide rule principles for quick and accurate calculation of the preheat and interpass temperature required for welding hardenable steels, this circular calculator uses steps based on chemical analysis and thickness of steel. It is available for 50 cents from Lincoln Electric Co., Dept. H, 22801 St. Clair Ave., Cleveland 17, O.

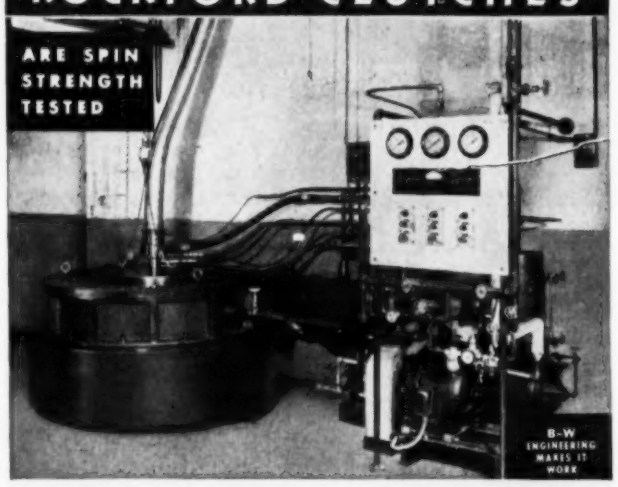
For more details circle NED-714 J3 on enclosed inquiry slip

Feeds, Reels, Cradles, Etc.

Durant Tool Supply Co.—New items described and illustrated in 16-page catalog "Press Room Equipment" include slide feeds and press guards, plus enlarged line of stock straighteners. Also covered are roll feeds, coil cradles, stock oilers, stock reels, foot presses, scrap choppers and wire straighteners. Engineering details and specifications are given.

For more details circle NED-715 J3 on enclosed inquiry slip

ROCKFORD CLUTCHES



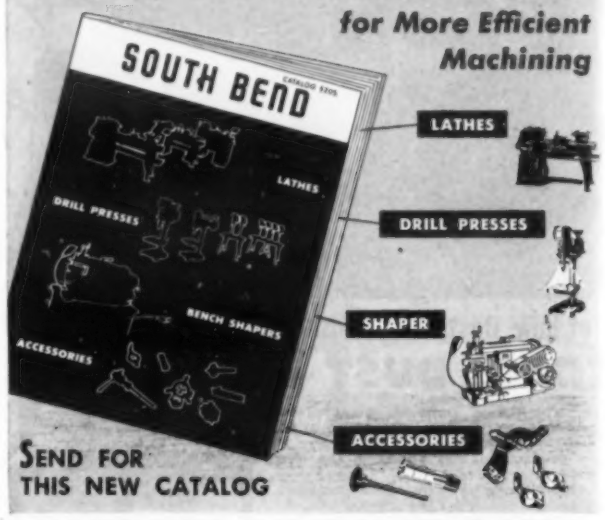
To determine the bursting speed of ROCKFORD CLUTCHES, they are spun up to a high R.P.M. in this air turbine speed chamber. This test assures they will continue to perform efficiently at the speeds for which they were designed. Let ROCKFORD engineers devote the benefit of this and many other tests to your product's clutch design.

B-W PRODUCTION MAKES IT AVAILABLE

ROCKFORD CLUTCH DIVISION BORG-WARNER
312 Catherine Street, Rockford, Illinois, U. S. A.

For more details circle NED-716 J3 on enclosed inquiry slip

SOUTH BEND
LATHES • DRILL PRESSES • SHAPERS
for More Efficient Machining



SEND FOR THIS NEW CATALOG

Complete in every detail, this new South Bend catalog is a valuable reference book which every shop man should have. Send for your copy today.

Engine Lathes — 9", 10", 13", 14½", 16" and 16-24" swing.
Bench Lathes — 9" and 10" swing.
Toolroom Lathes — 10", 13", 14½" and 16" swing.
Turret Lathes — ½" and 1" collet — 9", 10", 16" swing.
Drill Presses — 14" Precision, Economy and Production models.
Shaper — 7" bench model with or without stand.
Accessories — for lathes, drill presses, shapers.

SOUTH BEND LATHE • South Bend 22, Indiana

For more details circle NED-717 J3 on enclosed inquiry slip

MERRILL MATERIALS HANDLING DEVICES

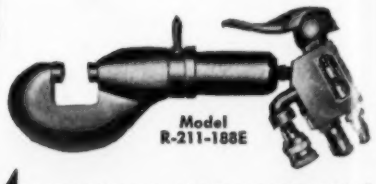
3-M-2

MERRILL BROTHERS
56-13 ARNOLD AVENUE MASPETH, N. Y.

For more details circle NED-718 J3 on enclosed inquiry slip

NEW MANCO
HYDRAULIC RIVETER

Here's fast, silent, and powerful hydraulic riveting. Riveting cycle only one second. Easy-to-operate hand lever valve mounted on riveting head. No solenoids. Capacity for ¼" and 5/16" rivets. Adjustable pressure setting for use on straight and shoulder rivets. Riveting yoke reach is 1¾" with a gap of 1⅜" including rivet sets. Other yokes also available. Full swivel about cylinder axis permits easy placement. Compact electric hydraulic pump. Weight of riveting head . . . 18 lbs.



Other Manco Riveters are available with capacities from 10 to 150 tons. Send us your riveting problem.

Dept. NED-9

MANCO mfg. co.
Bradley, Illinois

For more details circle NED-719 J3 on enclosed inquiry slip

Protects AIR TOOLS AND EQUIPMENT

against rust, scale and condensation in the air line ...provides constant lubrication

The Keller Lubricator-Filter operates automatically when air tools or equipment are in operation. Filter removes moisture as well as solids—easily cleaned by opening drain cock at bottom. Oil feeds from the lubricator through an upright wick—no flooding or waste when tools are not in use.

Transparent bowls show when filter needs draining, or when light spindle oil should be added to lubricator. Write for descriptive Bulletin #65-5.

Send for illustrated descriptive bulletin and detailed information

Keller Tool Company
GRAND HAVEN, MICHIGAN

For more details circle NED-720 J3 on enclosed inquiry slip

NEW TURNTABLE DOWN-DRAFT dust collecting benches by WOLVERINE

Revolving turntable allows the operator to work all around the casting without stop for re-positioning . . . an addition to the standard Wolverine rectangular benches — Provides: • Better dust collection due to higher velocity. • New design, permitting exhaust outdoors where required, or return to room if desired. • Standard velocity, 300 feet per minute, and, if application requires, higher velocities available up to 800 feet per minute. • Ideal system for collecting dust from grinding, polishing and sanding operations.

Heavy duty industrial viscous filters in rear compartment remove dust from air stream and axial flow fan in top of rear compartment discharges vertically back into the room or outdoors if required.

Write for descriptive bulletin, Dept. N

WOLVERINE EQUIPMENT CO.
31 MAIN ST., CAMBRIDGE 42, MASS.

For more details circle NED-721 J3 on enclosed inquiry slip

For more details circle NED-722 J3 on enclosed inquiry slip

New Processes & Materials

WATER REPELLENT
applicable to paper, clay, concrete

Water repellent characteristics can be imparted to paper, glass, wood, asbestos, brick and concrete, among other materials, by application of Dow Corning XS-1. A solution of sodium salts of certain silicones, it can be applied by brush, spray or dip after diluting with water, or by mixing with paper or clay slurries. Treatment helps dirt or clay soils retain a high wet strength, reduces seepage and helps protect dirt roads, irrigation ditches and airplane landing strips. Material is mixed in concentrations of 0.5 to 5 per cent with water, with best results coming after application of two coats. Drying is by air in 24 hours or by application of heat at 110° C in 1 hour. It is strongly caustic in behavior. Developed by **Dow Corning Corp.**, Dept. IS, P. O. Box 592, Midland, Mich.

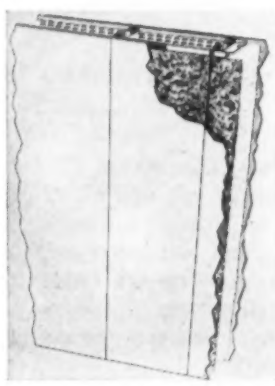
For more details circle NED-723 J3 on enclosed inquiry slip

QUENCHING SALT
for austempering-martempering use

For use in austempering-martempering furnaces, Marquench 296 contains a chloride coagulant which separates out the bath chloride content into an easily removed slurry which is not reassimilated during the quenching operation. Its usable quenching range is between 350 and 700°F. Made by **A. F. Holden Co.**, 11300-1 Schaefer Highway, Detroit 27, Mich.

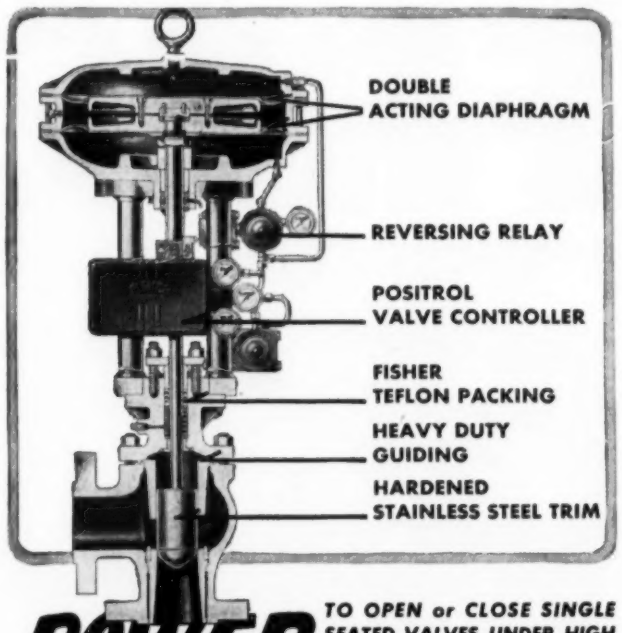
For more details circle NED-724 J3 on enclosed inquiry slip

INSULATED METAL WALL PANEL
for curtain wall construction



Usable in commercial and industrial building construction, Steelcraft insulated metal wall panels are particularly applicable where high unbroken wall areas are required. Panels are available in galvanized or painted steel, aluminum or stainless in either flush or fluted patterns. Core of glass fiber insulation is integral with panel, and heat transfer factor is superior to that of conventional masonry wall construction. Panels can be applied either horizontally or vertically to meet architectural needs. Made by **Steelcraft Mfg. Co.**, Dept. NED-53, 9017 Blue Ash Rd., Rossmoyne, O.

For more details circle NED-725 J3 on enclosed inquiry slip



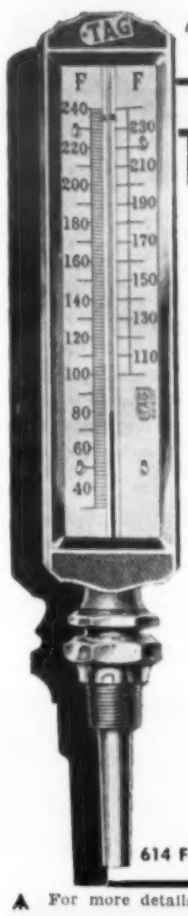
POWER TO OPEN or CLOSE SINGLE SEATED VALVES UNDER HIGH PRESSURE DROP CONDITIONS

Fisher Type 5700-458 "AMT" features full pneumatic performance—no springs, no levers or weights. Develops up to 5,000 lbs. stem thrust with 30 lbs. air supply. Designed for fast stroke action. Fully strokes inner valves in 13 seconds. Write for further information.

FISHER AMT*
DIAPHRAGM MOTOR VALVES FOR HEAVY DUTY SERVICE
*AMT "Answer Me Twice". In action, pressure added to one diaphragm, subtracted from other.

FISHER GOVERNOR COMPANY MARSHALLTOWN, IOWA

For more details circle NED-726 J3 on enclosed inquiry slip



TAG THERMOMETERS

Industrial Glass Types
Available in all required forms, scale lengths and ranges up to 1000°F. Bulletin T-29 gives complete information. Send for your copy.

ASTM or Standard Grade etched stem thermometers
Certified extreme precision grade thermometers are available singly, or in matched sets of nine, reading from −36° to +760°F., with overlapping ranges. Also standard grade for most laboratory, industrial and general testing work. Available armored or unarmored. Send for Bulletin T-28.

Hydrometers
In both plain and combined types, have easily read scales and many refinements to enhance accuracy. Certified hydrometers furnished with individual accuracy certificates.

WESTON ELECTRICAL INSTRUMENT CORPORATION
614 Frelinghuysen Avenue Newark 5, New Jersey

For more details circle NED-727 J3 on enclosed inquiry slip

Introducing NEW IDEAL Cush'N-Blo SOFT-FACE HAMMERS

the Safer Hammer that Saves the Surface!

• New IDEAL Cush'N-Blo Hammers are true SAFETY tools, designed and engineered to give you better soft-face hammer performance—*and save you money at the same time!*

Formulated of special plastic, the replaceable tips outwear ordinary soft-face materials—often by more than 10 to 1. They cannot chip or mushroom under heaviest blows—or "let go" flying particles to endanger workers. Tips are *spark-proof* and securely locked into *spark-proof* heads. They are not affected by oil, grease, gasoline or ordinary industrial acids.

Cush'N-Blo Hammers are carefully balanced for maximum accuracy and driving force. They turn out *more* work and *better* work with minimum effort because they reduce fatigue by reducing rebound.

SOLD THROUGH LEADING DISTRIBUTORS
See Them Now or Mail Coupon for Full Information

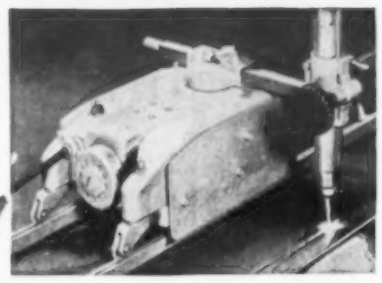
• A HAMMER FOR EVERY JOB
5 Diameters
14 Weights
Regular or Shot-Loaded

IDEAL INDUSTRIES, Inc.
1032 Park Avenue, Sycamore, Illinois
Please send catalog data and full description of your Cush'N-Blo Hammers.
Name_____
Company_____
Address_____
City_____ Zone____ State____

For more details circle NED-728 J3 on enclosed inquiry slip

SAVE TIME AND MONEY with this

OXWELD Trade-Mark **MACHINE CARRIAGE**



Here is a new lightweight machine carriage—the OXWELD CM-45—that will mechanize literally dozens of oxy-acetylene jobs in large or small metalworking shops, and do them better than the most skilled hands.

You save money when you let the CM-45 do your cutting, beveling, flame-treating, or special welding jobs. Its efficient operation saves oxygen and acetylene as well as time, and rejects are reduced to a minimum.

For further information, call your nearest LINDE representative today. Ask for a free copy of Form 7839. No obligation.

LINDE AIR PRODUCTS COMPANY
A Division of Union Carbide and Carbon Corporation
30 E. 42nd St., New York 17, N.Y. Offices in Other Principal Cities
In Canada: Dominion Oxygen Company, Limited, Toronto

"Oxweld" is a trade-mark of Union Carbide and Carbon Corporation.
For more details circle NED-729 J3 on enclosed inquiry slip

How a 'Sexauer' Easy-Tite faucet washer costing pennies can save you $115.22 a year!

A tiny, 1/32" faucet leak wastes 95,040 gallons—*$24.14* worth*—of water yearly.

Hot water leakage is even costlier . . . Fuel waste adds upward to *$91.08*** more to the loss. Total down the drain: *$115.22.*

And this is the dollar loss caused by only *one* pinpoint leak!

Fuel Waste		Water Waste	Total Waste
Oil (792 gals.)	**$91.08	$24.14	$115.22
Coal (9,879 lbs.)	88.91	24.14	113.05
Gas (84,411 cu. ft.)	84.81	24.14	108.95

*Water costs (figured at $1.90 for 1,000 cu. ft.) authenticated by Hackensack Water Co. **Fuel costs authenticated by American Gas Association.

Save money; cut costs; stop leaks with dependable 'Sexauer' Easy-Tite faucet washers.

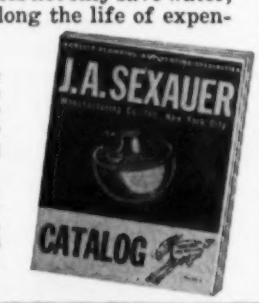
Built like a tire with fibreglas reinforcement

Easy-Tite faucet washers are made of a special du Pont product, instead of rubber, and reinforced with fibreglas. The result is a washer that resists the closing squeeze that splits and mushes ordinary washers. And Easy-Tites withstand destructive heat (up to 300° F. by test). These features explain why *'Sexauer' Easy-Tites outwear ordinary faucet washers 6 to 1!*

By avoiding labor on those 5 additional repairs, Easy-Tites cut today's high maintenance costs 83⅓%! But Easy-Tites not only save water, fuel, labor; they also prolong the life of expensive fixtures.

FREE CATALOG—Easy-Tite faucet washers are just part of the line of over 3000 'Sexauer' Triple-Wear plumbing repairs parts and patented precision tools.

Get complete information on Easy-Tites and other cost-cutting 'Sexauer' materials. Send for our FREE, new 118 page Catalog G. Fill in and mail the coupon today.



J. A. Sexauer Mfg. Co., Inc. Dept. AU-93
2503-05 Third Ave., New York 51, N. Y.

Gentlemen: *Please send me a copy of your FREE, new 118 page Catalog G.*

My name.....Title.....

Company or Institution.....

City.....Zone.....State.....

SEXAUER
WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

For more details circle NED-730 J3 on enclosed inquiry slip

New Literature & Catalogs

Push-Pull Controls

Arens Controls, Inc.—Practical engineering data, discussion of factors to consider in planning applications, blueprints and illustrations of various models are contained in the catalog "Guide to the Selection and Application of Arens Push-Pull Controls."

For more details circle NED-731 J3 on enclosed inquiry slip

Track Accessories

L. B. Foster Co.—In the 32 pages of illustrated catalog 575B you will find descriptions of many track tools, car door openers, manual car movers, drills, various types of jacks, rail benders and tongs, hopper car wrenches, etc. Also covered are bumping posts, derails, mine ties, push cars, rerailers, switch lamps, and others.

For more details circle NED-732 J3 on enclosed inquiry slip

Electroplated Gold

Technic, Inc.—Physical, thermal, chemical and electrical properties of electroplated gold are found in 4-page engineering data folder, along with electroplating specifications and application information. How the plating process is scientifically controlled is related.

For more details circle NED-733 J3 on enclosed inquiry slip

Industrial Elevating Equipment

Raymond Corp.—Illustrated 4-page bulletin 209 deals with line of electric industrial trucks and elevating equipment. Sizes and capacities for practically every materials handling need are treated.

For more details circle NED-734 J3 on enclosed inquiry slip

Gears to Specification

Rynel Corp.—Facilities for the production of custom precision fine-pitch gears are detailed in 8-page illustrated bulletin "New Concepts." Service offered includes design and production of gears for electronic, communication and instrumentation equipment, as well as for appliances, power tools and mechanisms.

For more details circle NED-735 J3 on enclosed inquiry slip

Heat-Treating Furnaces

Lee Wilson Contracting Co.—More than 14 individual furnace types including gas, oil, and electrically fired units are pictured in 8-page bulletin. Included are roller hearth, chain and belt conveyor, pit, strand heating and aluminum soaking pit types for all conventional heat-treating functions.

For more details circle NED-736 J3 on enclosed inquiry slip

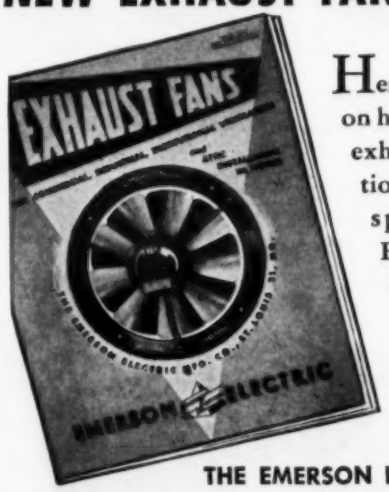
Toggle Switches

Minneapolis-Honeywell Regulator Co., Micro Div.—In eight illustrated pages, catalog 73 gives a complete picture of standard toggle switches in single and multiple subminiature and sealed designs. Construction, characteristics and ratings are given for all units.

For more details circle NED-737 J3 on enclosed inquiry slip

FREE

NEW EXHAUST FAN CATALOG



Here is valuable data on how to plan effective exhaust fan installations, plus complete specifications of Emerson-Electric Exhaust Fans. Send today for Bulletin No. 734.

THE EMERSON ELECTRIC MFG. CO.
St. Louis 21, Mo.

EMERSON ELECTRIC
FANS • MOTORS APPLIANCES

For more details circle NED-738 J3 on enclosed inquiry slip

. . . Increase Production . . . Lower Operating Costs!

with finger tip control

LOVEJOY *variable* **SPEED PULLEYS**

A mere turn of the hand is all that is required for instant speed correction on your machinery. Changes in production schedules, operator speed adjustment or specification variations are accomplished without loss of time or labor. Benefits of LOVEJOY finger-tip-control pulleys are reflected in an *improved* product—manufactured at a *lower* cost. Sizes from fractional to 8 hp. Ratios to 3 to 1.

Get full information on this complete line of economical variable-speed pulleys. Write today for fully illustrated catalog and engineering manual.

LOVEJOY FLEXIBLE COUPLING CO.
5003 W. Lake Street, Chicago 44, Ill.
Also Mfrs. Lovejoy Universal Joints and Lovejoy Flexible Couplings

For more details circle NED-739 J3 on enclosed inquiry slip

YOU SAVE STEEL MANHOURS MONEY

BY USING PLATECOIL FOR TANK HEATING AND COOLING

YOU SAVE CRITICAL STEEL because "Platecoils" require less than ½ the steel used in pipe coils of the same surface area. A 22" x 119" Platecoil weighs 95 lbs. against 239 lbs. for an equivalent 2" pipe coil. 144 lbs. steel saved. YOU SAVE CRITICAL MANHOURS because "Platecoils" are easily installed, cleaned or replaced in minutes . . . No down-time . . . No tank dumping. Many manhours saved. YOU SAVE MONEY because "Platecoils" cost up to 50% less in initial cost and require less maintenance. Investigate "Platecoils" today.

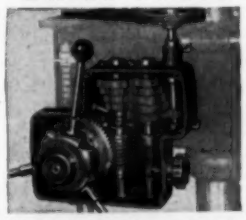
Send for complete technical manual and descriptive Bulletin No. P57

PLATECOIL Division Tranter Mfg. inc. LANSING 4, MICHIGAN

For more details circle NED-740 J3 on enclosed inquiry slip

GEAR-DRIVEN
POWER FEED

CLAUSING 18" HEAVY DUTY POWER FEED DRILL PRESS



Drills 1" in cast iron, ¾" in steel. No. 3 Morse Taper, 6½" spindle travel. HEAVY DUTY GEAR-DRIVEN, DIAL-SELECTION POWER FEED TO TAKE ADVANTAGE OF THIS BIG TOOL AND JOB CAPACITY! Plus *new spindle bearing* engineering, *vernier depth stop, exclusive head and table positioning mechanism.* A truly great tool! Send for literature today.

CLAUSING DIVISION
ATLAS PRESS CO., 9-113 N. PITCHER ST., KALAMAZOO, MICHIGAN

For more details circle NED-741 J3 on enclosed inquiry slip

ABRASIVE WHEELS FOR CUTTING OFF...

Free booklet outlines advantages, lists recommendations

Source: THE CARBORUNDUM COMPANY Niagara Falls, New York

Abrasive cutting off, generally 12 to 20 times faster than sawing, produces closer tolerances and smoother, more finished cuts. And, as this booklet by CARBORUNDUM points out, subsequent finishing operations are often unnecessary.

"Metallic Cutting Off with Abrasive Wheels" is written to give you the facts you need to determine the type of cut-off machine and abrasive wheel which will do your jobs most economically. Especially if you now use abrasive cutting machines, you will find information in this booklet to help you improve performance and production.

CARBORUNDUM offers you a complete line of wheels for all types of cutting operations, from portable to fully automatic—resinoid bond wheels for dry cutting, rubber bond for wet cutting, and "MX" fibre-reinforced wheels for dry cutting in more severe operations. The booklet describes all of them—and their uses.

Whatever you cut—ferrous or non-ferrous metals in any shape or form, glass, porcelain, plastics, cemented carbides, hard rubber, etc.—you can count on abrasive wheels by CARBORUNDUM to do the job quickly and economically.

Send for your copy of this valuable booklet today. And call your CARBORUNDUM distributor or salesman for expert help with any cutting or grinding operation.

"Carborundum" and "MX" are registered trademarks which indicate manufacture by The Carborundum Company, Niagara Falls, N. Y.

91-319

For more details circle **NED-742 J3** on enclosed inquiry slip

This TUFFLEX sample kit MAY SOLVE YOUR PROBLEM

Seeing is believing—and this kit, containing actual samples of Tufflex may point the way to new product improvements and cost-saving for you. Tufflex is the amazing felted cellulose fiber that's fleecy, soft and tough at the same time. Tufflex resists heavy impact blows—die-cuts with clean edges—insulates—absorbs sound. Its wonderful flexibility suits it to a wide variety of uses. Send now for your free Tufflex sample kit and full information. Wood Conversion Company, Dept. 127-93, First National Bank Building, St. Paul 1, Minnesota.

Keep Your Eyes On... **TUFFLEX***

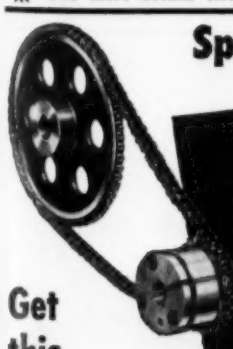
Guaranteed by Good Housekeeping

Cellulose Cushion Padding

*REG. U.S. PAT. OFF.

For more details circle **NED-743 J3** on enclosed inquiry slip

Sprocket Savings!



lower NEW PRICES

BOSTON Gear SAME QUALITY

Get this NEW SPROCKET CATALOG SUPPLEMENT SC-2

Complete buying information on Standard Sprockets and on new line of SHOLD-A-GRIP Interchangeable Tapered Bushings and Sprockets . . . also Chain, and new Chain Breaking Tool.

ASK YOUR BOSTON Gear DISTRIBUTOR

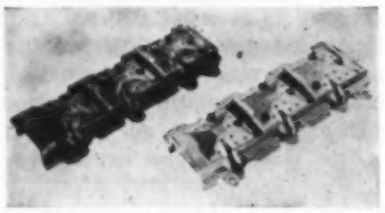
for the new Sprocket Catalog, or write Boston Gear Works, 69 Hayward St., Quincy 71, Mass.

For more details circle **NED-744 J3** on enclosed inquiry slip

New Processes & Materials

METAL SURFACE TREATMENT

produces uniform wells that prevent seizing or sticking of moving parts



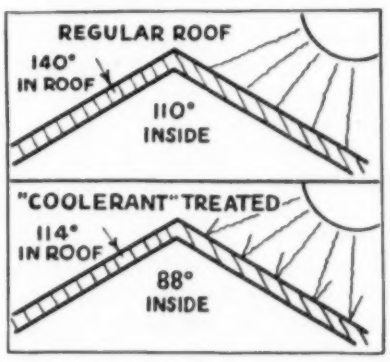
Method of surface treating of metal parts known as Metablast reportedly reduces friction; dissipates heat; and prevents moving parts from seizing, sticking or burning. Process consists of shooting a uniform abrasive suspended in liquid in a controlled high pressure spray against metal surface. Spray produces minute identical wells or pits which can be varied in coarseness or fineness and still maintain tolerances of parts to within 0.0001-in.

Casting molds of all types conditioned in this way reportedly have less sticking between mold and casting, and allow easy removal of parts. Punching and stamping dies with this controlled matte surface allow metal being formed to slide smoothly over die. When Metablasted, mated metal parts such as gearings and gears hold lubricant well and resist galling because of smaller contact area. Process is also applicable to removal of hard crusts, rust, scale, old paint or coatings. It is also an excellent pre-painting treatment for metals. Technique developed by **American Metaseal Mfg. Corp.,** 607 65th St., West New York, N. J.

For more details circle **NED-745 J3** on enclosed inquiry slip

COOLING ROOF FINISH

effects below-roof temperature drop



Once treated with Tropical Roof Coolerant, factory and office roofs reflect much of the sun's radiant heat, with the net effect of decreasing the temperature under the roof. One test showed that with a summer day temperature of 96°, the below-roof temperature in a plant reached 116°, but with application of the roof finish, an immediate drop of 26° was noticed in work areas. It can also serve to decrease the load on air conditioning systems. Coolerant bonds a "seamless aluminum blanket" to the roof which remains bright and heat resistant for long periods. It also prevents the roof from drying out and becoming brittle. Made by **Tropical Paint & Oil Co.,** 1150-1300 W. 70th St., Cleveland 2, O.

For more details circle **NED-746 J3** on enclosed inquiry slip

Over 85% of the torque wrenches used in industry are

STURTEVANT TORQUE WRENCHES

Read by Sight, Sound or Feel

- Permanently Accurate
- Practically Indestructible
- Faster—Easier to use
- Automatic Release
- All Capacities

in inch ounces ...inch pounds ...foot pounds (All sizes from 0-6000 ft. lbs.)

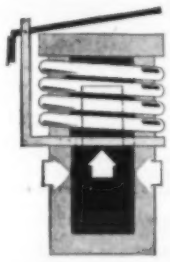
Every manufacturer, design and production man should have this valuable data. Sent upon request.

P.A. STURTEVANT CO. ADDISON QUALITY ILLINOIS

For more details circle **NED-747 J3** on enclosed inquiry slip

STOP MOTOR BURNOUTS

eliminate heater replacements with THIS



Heinemann Motor Switches do not employ thermal warp elements or heaters, therefore they are not affected by surrounding temperature. No replacement parts are ever necessary.

Operating on a hydraulic-magnetic principle (illustrated at left), they allow starting inrush or momentary overloads but trip immediately on harmful overloads.

Heinemann Motor Switches will answer the need for complete motor protection and reduced maintenance in your plant.

Send for Bulletins 1010 and 1410.

HEINEMANN ELECTRIC CO. 106 Plum St. Trenton 2, N. J.

HEINEMANN MOTOR SWITCHES

For more details circle **NED-748 J3** on enclosed inquiry slip

ENAMELSTRIP

STEEL · ALUMINUM · BRASS · PRE-FINISHED COLOR COIL

assures a perfect finish before fabricating

You can easily cut production time and cost with Enamelstrip, the continuous-feed, pre-colored metal coil. Leading manufacturers of metal products are using it with outstanding results in a wide variety of items. Enamelstrip's exclusive, flexible finish withstands the stresses of drawing, bending and forming without cracking or peeling. Many companies have entirely eliminated their finishing departments! Any metal in any finish will be coated and slit to your own specifications.

Write TODAY for detailed color bulletin.

THE COATED COIL CORPORATION

507 West 30th Street, New York 1 • LOngacre 5-3161

For more details circle **NED-749 J3** on enclosed inquiry slip

NEW and TIMELY!

Get This Information on How to Select Stainless Steels to...

- ✓ Conserve Critical Alloys
- ✓ Reduce Unit Costs
- ✓ Improve Performance

This new, 18-page bulletin, "Factors in Selecting Stainless Steels" gives facts and figures on...

- Possibilities of straight chrome grades as alternates for chrome nickel grades
- General types of stainless steels
- Physical and mechanical properties
- Relative workability tables
- Relative corrosion and heat resistance

CLIP AND MAIL COUPON NOW!

THE CARPENTER STEEL COMPANY

118 W. Bern St. • Reading, Pa.

At no obligation, send me a copy of your new "Factors in Selecting Stainless Steels".

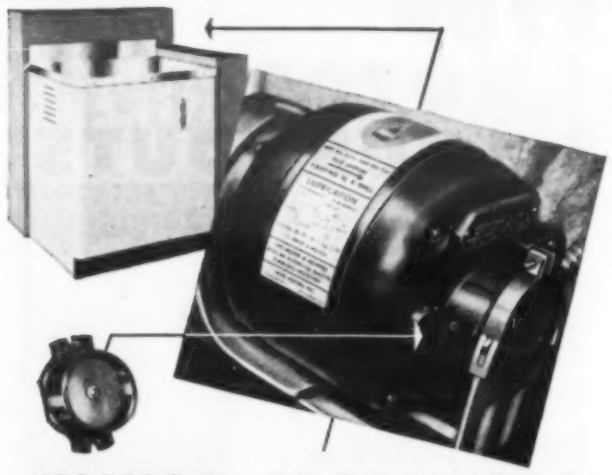
NAME_____ TITLE_____ (Please Print)

COMPANY_____

ADDRESS_____

CITY_____ ZONE_____ STATE_____

For more details circle **NED-750 J3** on enclosed inquiry slip



KLIXON PROTECTORS

Help keep the "heat on" in York-Shipley Boiler Units

Modern in design, compact for space saving, the York-Shipley oil-fired, table-top boiler units provide plenty BTU's for outstanding home and hot water heating.

York-Shipley engineers specify and use motors with built-in Klixon Protectors to insure dependable, long-lived motor operation.

Here's what Mr. H. Leroy Mohn, project engineer, has to say about Klixon Protection:

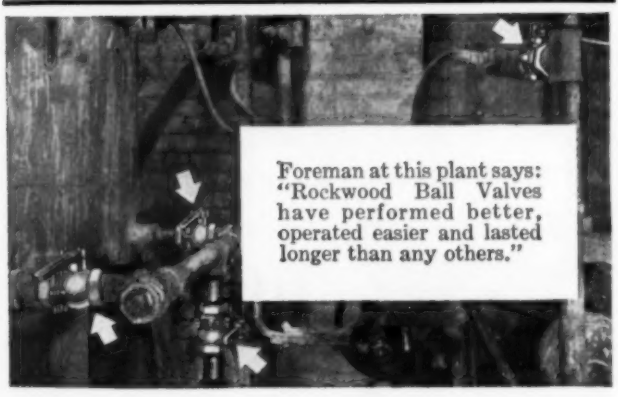
"We prefer Klixon built-in motor protection in our oil burner and circulating pump motors because we find they reliably protect motors against unusual load conditions. Our experience with these protectors has been excellent."

You, too, can keep motors in your equipment operating, reduce service calls and repairs by specifying and using Klixon protected motors. The additional cost is low, pays for itself over and over by reducing motor burnouts.

SPENCER THERMOSTAT
Division of Metals & Controls Corporation
1909 FOREST STREET, ATTLEBORO, MASS.

KLIXON

For more details circle NED-751 J3 on enclosed inquiry slip



Do you need a
FULL-FLOW VALVE?

FULL-ROUND-FLOW in ceramics plants, where Rockwood Ball Valves, handling clay-and-water mixtures, protect product quality by preventing air bubbles caused by turbulence in conventional valves. What are *your* applications?

Other features — positive leakproof seating; quick opening and closing and extra wear-resistance. Tested and listed by Underwriters' Laboratories, Inc. Write for complete details. Rockwood Sprinkler Company, 44 Harlow Street, Worcester 5, Mass. Distributors in all principal cities

ROCKWOOD

ROCKWOOD FULL-FLOW BALL VALVES
THE FLOW IS AS ROUND AS THE PIPE ITSELF

For more details circle NED-752 J3 on enclosed inquiry slip

FREE SAMPLE

- Makes and keeps belts soft and pliable
- *Pliable* belt "clings" to "surface" of pulley
- Dissolves hard "glaze" that makes belts slip
- *Only* belt preservative that has met and passed U. S. Government Tests and Requirements
- Sold with money-back guarantee since 1896

Cling-Surface Company, Inc.
1045 Niagara Street • Buffalo, New York
Please send me FREE sample can of Cling-Surface "50" Belt Preservative
Name.....
Title.....
Company.....
City.....State.....

For more details circle NED-753 J3 on enclosed inquiry slip

New Literature & Catalogs

Pressure & Vacuum Gages

Minneapolis-Honeywell Regulator Co., Industrial Div.—Many types of pressure and vacuum gages covering the pressure range from 0.00000000001-mm of mercury to over 150,000 psi are described in 32-page illustrated catalog 7001. Information is included on indicators, recorders, pneumatic and electric controllers, and pneumatic transmission equipment for use with gages.

For more details circle NED-754 J3 on enclosed inquiry slip

Water-Tube Steam Generators

Superior Combustion Industries, Inc.—Developing pressures up to 400 psi and designed to provide fully automatic firing with oil, gas, or stoker-fired coal, factory-assembled water-tube steam generators are described in 8-page illustrated catalog. Nine units are featured, with capacities ranging from 5300 to 33,000 lb of steam per hour. Construction data, mounting dimensions and specifications are all given.

For more details circle NED-755 J3 on enclosed inquiry slip

Mill Chain & Accessories

Chain Belt Co.—60-page illustrated catalog 53-110 gives complete listings and prices for Rex cast and steel chain, cast tooth sprockets, belt conveyor idlers and spray nozzles. Take-ups, buckets, idlers and chain attachments are also listed. Booklet is a useful reference for designers and purchasers of equipment using sprocket chains and power transmission machinery.

For more details circle NED-756 J3 on enclosed inquiry slip

Handling Barrels

Elwell-Parker Electric Co.—"Logistics of Barrels" is an 8-page illustrated booklet describing the advantages of the load unit system of handling barrels or any other cylindrical shaped containers by industrial power trucks. Pallets or skids are utilized. Booklet describes special truck attachments, and offers suggestions on planning materials flow and storage.

For more details circle NED-757 J3 on enclosed inquiry slip

Plastics Engineering Bulletins

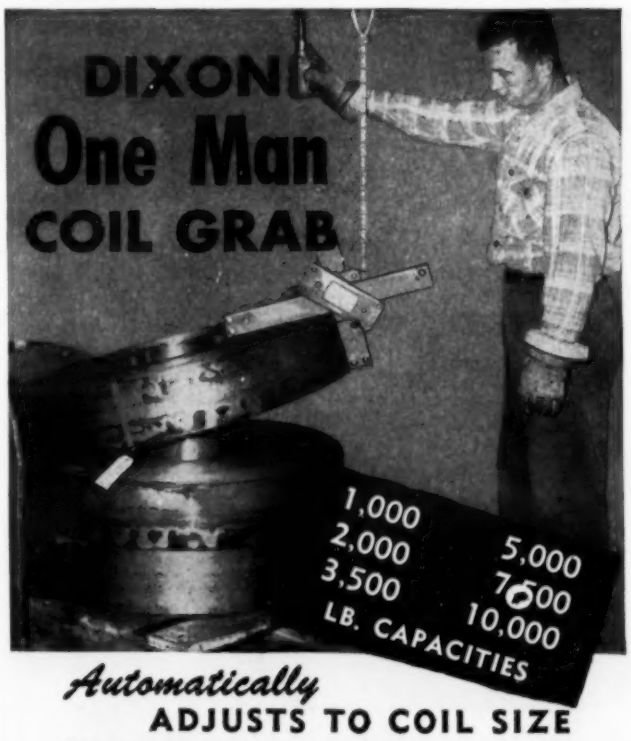
W. S. Shamban & Co.—Engineering bulletins describing Fluorothene and Teflon products including rods and tubes, sheet and strip, O-rings and piston rings are now available for your file. Technical data including product weights and applications are given.

For more details circle NED-758 J3 on enclosed inquiry slip

Screens, Feeders & Conveyors

Simplicity Engineering Co.—28-page illustrated catalog describes screens, feeders and conveyors for mill, factory, mine and quarry. Gyrating, horizontal and decked type screens are included. One unit screens damp and sticky materials without build-up or blinding, another offers an economical method of dewatering sand and gravel.

For more details circle NED-759 J3 on enclosed inquiry slip



Automatically
ADJUSTS TO COIL SIZE

Seven standard models available to handle coils from 1" to 48" wide.

Export Dept.: 306 W. Washington Blvd., Chicago 6, Ill.

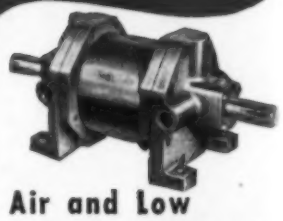
DIXON *Automatic Tool, Inc.*
2310 23rd Ave. • ROCKFORD, ILLINOIS

For more details circle NED-760 J3 on enclosed inquiry slip

GET THESE FEATURES IN ALL YOUR FUTURE CYLINDERS

Hydraulic High Pressure

- Centrifugally Cast Cylinder Bodies
- Cast Steel or Semi-Steel End Caps
- Cast Iron Piston with Automotive Type Rings
- Leakproof Packing. "O" Rings in each end cap
- Adjustable Port Location
- Fixed Cushions Standard Construction — Adjustable Cushions Optional



Air and Low Pressure Hydraulic

- Compact — No Tie Rods
- Extra heavy walls of selected tubing
- Metal to metal assembly preload piston cups
- Automatic rod packing requires no take-up. Seals under pressure
- Aluminum alloy piston with steel cup retainer
- Extra long rod guide

HYDRO-LINE CYLINDERS CONFORM TO J. I. C. STANDARDS

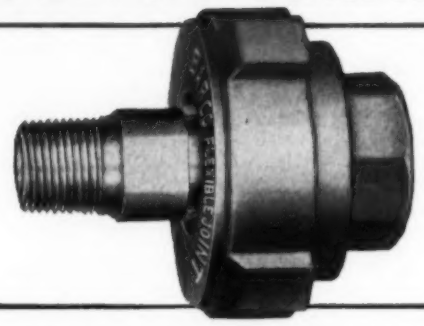
➔ FREE Additional Data

covering additional construction and performance features are included in this catalog. Write for your copy today. Ask for bulletin 350.

Hydro-Line
HYDRO-LINE MFG. CO.
701 19th St.
ROCKFORD, ILLINOIS

For more details circle NED-761 J3 on enclosed inquiry slip

NEW! LEAKPROOF ROTARY SWIVEL JOINTS



- **PERFECT SEALING—HOT OR COLD!** Thanks to Barco's new #11 CT (chemically inert) seal.
- **NO BINDING, LOW TORQUE!** For improved operation of press platens, die heads, movable cylinders.
- **SELF-ALIGNING!** Simplifies and speeds up installation. Minimizes wear. Where needed, joints without side flexibility can be supplied.

Send for complete information today. The Barco line is complete with sizes and styles to meet every need. BARCO MANUFACTURING CO., 530K Hough St., Barrington, Illinois (A Chicago Suburb)

BARCO MFG. CO.

In Canada: THE HOLDEN CO., LTD. Montreal, Canada

For more details circle NED-762 J3 on enclosed inquiry slip

Speed Up Material Handling

Here's a handy, mobile crane for lifting or loading jobs around your plant. Ideal for dismantling, moving or erecting machinery . . . loading and unloading structural iron, pipe, bars, lumber and equipment of all types. The UNIT 357 is self-propelled . . . rides on rubber at road travel speed . . . is easy to maneuver even in cramped yard conditions. Operated by ONE man . . . powered by ONE engine . . . swings in a 360° circle. Full vision cab gives complete visibility. Promotes Safety. Write for Catalog.

UNIT CRANE & SHOVEL CORP.
6607 W. Burnham Street, Milwaukee 14, Wis., U. S. A.

UNIT
CRANES • CLAMSHELLS • MAGNETS

For more details circle NED-763 J3 on enclosed inquiry slip

a new way to

AIRETOOL AUTOMATIC RETRACTIVE TUBE EXPANSION CONTROL SYSTEM

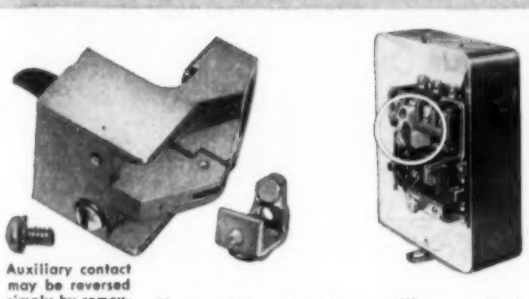
Now, eliminate step rolling. Assure tight, leakproof joints every-time. The AIRETOOL Retractive Method of tube expansion draws metal toward tube mouth, prevents inward elongation. The tube is expanded for a short section at the far surface of the sheet. The motor shuts off at full expansion, and the expander automatically retracts, giving full expansion through the full thickness of the sheet . . . in one fast operation.

For full details, descriptive literature, write to:

The AIRETOOL Manufacturing Co., Springfield, Ohio
Branch offices: New York • Chicago • Philadelphia • Houston • Tulsa
Baton Rouge • Hudson Heights (NJ)
Representatives in principal cities of U.S.A., Canada, Mexico, South America, England.

For more details circle NED-764 J3 on enclosed inquiry slip

HANDY AUXILIARY
CONTACTS



Auxiliary contact may be reversed simply by removing one screw.

These new, compact, auxiliary contacts can be added to the arc hood of all Allen-Bradley standard Sizes 0, 1, 2, and 3 solenoid starters, contactors, reversing switches, and combination starters. The operating lever of the auxiliary contact is actuated by the up-and-down motion of the crossbar on which the moving contacts are mounted. Write for complete information.

Allen-Bradley Co.
1334 S. Second St., Milwaukee 4, Wis.

ALLEN-BRADLEY
QUALITY
SOLENOID CONTROLS

For more details circle NED-765 J3 on enclosed inquiry slip

FREE TRIAL SHOWS HOW!

SHAKEPROOF
T. M. REG. U. S. PAT. OFF.
"SPEED-NUTS*"
SAVE TIME . . . REDUCE COSTS!

Designed to clip quickly and easily in place, SHAKEPROOF "SPEED NUTS" eliminate costly riveting, staking or welding operations. Light weight and easy handling speeds assembly.

SEND FOR FREE TEST KIT NOW!

*T. M. REG. U. S. PAT. OFF.—BY TINNERMAN PRODUCTS, INC.

SHAKEPROOF
"Fastening Headquarters"
DIVISION OF ILLINOIS TOOL WORKS
St. Charles Road, Elgin, Illinois
Offices in principal cities

For more details circle NED-766 J3 on enclosed inquiry slip

New Processes & Materials

FURANE RESIN CEMENT
for acid brick, tile constructions

Alkalies, acids, solvents, hot water and steam are resisted by Resiment, a furane resin cement used as mortar for acid brick or tile in corrosion-resistant tank linings, floors, sewers, towers and similar installations. It is low in porosity, high in compressive and tensile strength and resists impact and abrasion. Shipped in powder and liquid form for mixing at time of use, cement sets quickly in both summer and winter temperatures. It withstands up to 375° F. Made by **Delrac Corp.**, Dept. 133, Watertown, N. Y.

For more details circle NED-767 J3 on enclosed inquiry slip

CORRUGATED PLASTIC
for skylights and window walls

Reduction of eye strain and fatigue and elimination of harsh contrasts of light and shadow are possible with Structoglas, a glass fiber-reinforced plastic material for use in skylights or window walls. It filters out infrared and ultraviolet rays of the sun. Sheet material is flat or corrugated to fit standard corrugations of steel, aluminum or asbestos roofing and siding. It can be worked with ordinary hand tools and bolted directly to the building. Material is available in a range of both medium and low light transmission qualities and colors. Made by **International Molded Plastics, Inc.**, Structoglas Div. NE, 4387 W. 35th St., Cleveland 9, O.

For more details circle NED-768 J3 on enclosed inquiry slip

ALUMINUM WELDING FLUX
carries off opaque slag blanket

Effectiveness of type 202 aluminum welding flux lies in its ability to carry off opaque oxide slag blanket automatically so that operator can readily see the molten puddle. Flux reduces oxides immediately upon application and continues to do so throughout heating cycle. It becomes liquid at point in cycle when metal is ready to weld, serving as temperature indicator as well. With flux, the hotter flame of oxyacetylene can be used without fear of overheating. Flux can be used as back-up material on butt or T-joints to control penetration, or used to eliminate oxide notch on back of work. It is easily removed after welding, and will not produce corrosive pitting on parent metal. Developed by **Solar Aircraft Co.**, 2202 Pacific Highway, San Diego 12, Calif.

For more details circle NED-769 J3 on enclosed inquiry slip

Lightweight Easy-to-use Strap Cutter

This lightweight cutter cuts steel strapping swiftly and easily with just the pressure of your hand.

Weighing just one pound and only 9½ inches long—Acme Steel's E14AO Strap Cutter cuts steel strapping up to ¾ inch. Built-in band guide keeps strap from turning on edge or wedging between blades. Write Acme Steel Products Division, Dept. NED-93, 2840 Archer Avenue, Chicago 8, Illinois.

Strap It . . . Stitch It . . . Ship It . . . Safely

ACME STEEL

For more details circle NED-770 J3 on enclosed inquiry slip

HOW TO SAVE MONEY ON
STEEL SHELVING

The real cost of shelving is the erected cost

That's why highest quality DeLuxe shelving costs you less. DeLuxe precision shelving has *fewer parts*, uses *80% less bolts* and is the *only shelving* available that is *100% adjustable*. It's quicker, less costly to install—easier to adjust.

Wherever you are, a DeLuxe factory representative is available to give you a complete engineering, planning and layout service without obligation.

Write for a free catalog now, while your mind is on shelving.

DELUXE METAL FURNITURE CO.
305 Struthers St., Warren, Pa.

For over 25 Years Manufacturers of.
Storage Shelving • Library Shelving • Storage Cabinets • Shop Equipment

For more details circle NED-771 J3 on enclosed inquiry slip

If you use bin-stored materials you can handle them better with a Simplicity Os-A-Veyor type bin feeder

If you move anything that can be stored in a bin, chances are a Simplicity Os-A-Veyor type bin feeder will cut handling costs and speed up your operations. Simplicity Bin Feeders practically eliminate bridging and stoppage because they feed from the full length of the bin—materials will flow as you need them. Simplicity bin feeders are ideal, too, for storing and moving materials that are improved by tempering. Simplified power and operating mechanism keeps maintenance costs low, makes servicing easy. Write us today for complete information.

Simplicity ENGINEERING CO., DURAND, MICH. 101

For more details circle NED-772 J3 on enclosed inquiry slip

Engineering Room of AiResearch Manufacturing Company, Inglewood, California

REZNOR Gas Unit Heaters

Because they provide better distributed comfort with faster response to temperature changes . . . never overheating . . . never underheating.

Because they lend themselves better to a modern operation, both functionally and architecturally.

Because they are more economical in original cost, operating cost and save in building and installation costs.

SEE REZNOR CATALOG IN SWEETS FILES

REZNOR
WORLD'S LARGEST-SELLING GAS UNIT HEATERS

REZNOR MANUFACTURING COMPANY
41 UNION STREET · MERCER, PENNSYLVANIA
Please send me Reznor Catalog No. GN-52

Name .....
Firm .....
Address .....
City ..... Zone ..... State .....

For more details circle NED-773 J3 on enclosed inquiry slip

Star has 'em
WHEN YOU WANT 'EM!

STAINLESS STEEL FASTENINGS OF ALL TYPES RIGHT OFF THE SHELF

In-Stock-Service on small or large quantities • Cap Screws • Machine Screws • Sheet Metal and Wood Screws • Set Screws • Nuts, Washers, Etc.
Class 3 AN Drilled Fillister Heads.
Fast service on special screw machine products.

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New Catalog Available
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SALIENT FEATURES OF HAR-BAR BARRIERS

1. High enough to stop your car.
2. Low enough to clear your bumper guards.
3. Barrier is above ground — no drainage problem.
4. Barrier is above ground — no rotting of wood.
5. Automatically spaces your cars.
6. Follows contour of your ground.
7. Easily installed — just line up and drive the anchor pins.
8. Easily moved — just pull the anchor pins.
9. Easy to clean under.
10. Easy to maintain.
11. Installed on any kind of surface — black top, cement, macadam, gravel or cinders.
12. It really dresses up your parking lot.
13. You always stop against your tire — no shock.
14. Castings are non-rusting aluminum alloy.

Send us a plot plan of your parking lot—we do the engineering free.

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MASSCO-GRIGSBY
RUBBER PINCH VALVES
FOR ABRASIVE PULPS & CORROSIVE LIQUIDS
SIZES 1" to 12" DIA.
*PATENTED

The Mine & Smelter Supply Co.
DENVER 17, COLORADO
WRITE FOR FREE BOOKLET

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New Literature & Catalogs

Electric Heating Devices

Waage Electric, Inc.—Complete line of electric heating devices and controls for industrial, laboratory and processing operations is described in 16-page illustrated catalog No. 53 W. Covered are strip, band, cartridge, immersion, fin and radiant grid heaters; controls and switches; melting pots; lab stoves; and electric irons.

▲ For more details circle NED-777 J3 on enclosed inquiry slip ▲

Internal Grooving Tool

Waldes Kohinoor, Inc.—How the Truarc grooving tool can best be used for precision cutting of recesses in housings and bores is related in 20-page illustrated catalog GT 2-53. Tools will cut accurate grooves in diameters from 0.250 to 5.000 in. Case histories show how tool has solved complex machining problems.

▲ For more details circle NED-778 J3 on enclosed inquiry slip ▲

Liquid Processing Equipment

Alsop Engineering Corp.—32-page catalog on "Alsop Liquid Processing Equipment" covers filters, filter disks, mixing and storage tanks, portable mixers, fixed-side and top-entering agitators and transfer pumps. Catalog treats each product separately, citing its features and design variations, showing it in installation and giving application and performance data. Special design services offered by company are made known as well.

▲ For more details circle NED-779 J3 on enclosed inquiry slip ▲

Plant Layout System

Magne-Plastic Corp.—"Here's More on the Magne-Plastic Story" is title of booklet describing this system for making plant layouts without drafting and getting a printed record in 10 minutes with Magne-Plastic templets. Machine sketching instructions and price information is also offered.

▲ For more details circle NED-780 J3 on enclosed inquiry slip ▲

Solenoid Valves

J. D. Gould Co. — 30-page pamphlet introduces Velvetrol series of electric control valves and mechanical bypass-starter valves for general hydraulic applications requiring shock, speed and flow controls. Highlights are 4 pages of flow curves, nomenclature glossary, price list and installation and operating instructions. Complete data sheets on eight types are featured.

▲ For more details circle NED-781 J3 on enclosed inquiry slip ▲

Centrifugal Blowers & Exhausters

Lamson Corp.—Centrifugal blowers and exhausters for air or gas handling made by Billmyre Blower Div. of this company are cataloged in 32-page bulletin B-6. Units are available with either cast iron or fabricated steel housings and operate on pressures from ½ to 7 psi. Illustrations show wide variety of applications.

▲ For more details circle NED-782 J3 on enclosed inquiry slip ▲

G. E. announces . . .

NEW RIGID CONDUIT
NEW G-E WHITE

Now! A brand-new G-E WHITE rigid steel conduit, featuring easy bending, easy wire-pulling, and improved corrosion protection. A rigidly tested zinc-coating process, "metallizing," bonds a controlled, uniform coating of pure zinc to the conduit, threads and all, without hardening it. New G-E WHITE is lined with a corrosion-resistant coating containing an anti-friction agent for easier wire-pulling. Try it on your next job. Section C29-961, Construction Materials Division, General Electric Company, Bridgeport 2, Conn.

You can put your confidence in—
GENERAL ELECTRIC

▲ For more details circle NED-783 J3 on enclosed inquiry slip ▲

CUT BLUEPRINTING COSTS 50% TO 80%
SAVE TIME—SAVE MONEY

VERSA-LINER SPEED MASTER MODEL "S" AMMONIA-TYPE WHITEPRINTER
NEW, FASTER—MORE EFFICIENT!

● *Prints up to 14 ft. per min. Develops at 8 ft. per min.* Produces black line and colored line whiteprints in volume at low cost! Handles cut sheets or roll stock up to 42" wide in any length. *Equipped with 2000 watt* high pressure Vicor jacketed lamp for greater printing speed. *Newly devised blower system* for coolest contact—protects originals. Feed, delivery and all controls in front, within easy reach. Easy to install and operate. Trouble-free. Simple to clean. Minimum maintenance. 220 v. single-phase 60 cycle AC. Priced at $1565.00. *Get full facts now.*

Also other Versa-Liner and Spee-Dee Whiteprinting Outfits for Moist Diazo or Ammonia Dry Process from $55.00

PECK & HARVEY 5638 N. WESTERN AVE. CHICAGO 45, ILLINOIS
Founded in 1937—Over 10,000 Machines in Use
MFRS. OF WHITEPRINT, BLUEPRINT AND PHOTOCOPY EQUIPMENT

▲ For more details circle NED-784 J3 on enclosed inquiry slip ▲

ALLIS-CHALMERS Totally-Enclosed FAN-COOLED MOTORS

Get These 3 Low Maintenance Features

1 *Wide Open Air Flow* No enclosed external air passages to clog. Easy to clean with cloth, brush, air hose or vacuum.

2 *Cast Iron Construction* Cast iron frame and conduit box resist corrosion. Well-suited to outdoor operation.

3 *Pre-lubricated Bearings* Ball bearings are double-shielded type, pre-lubricated at the factory. In-service lubrication if necessary.

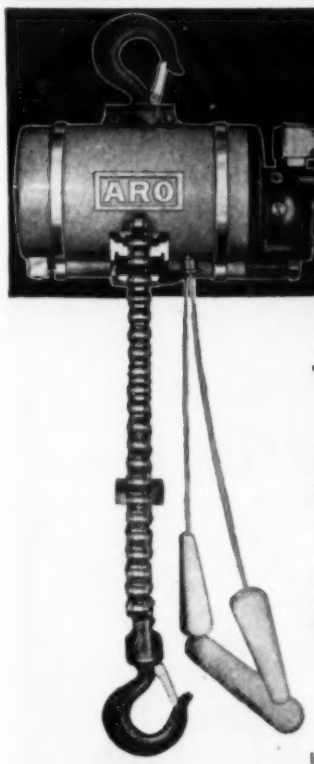
GET COMPLETE INFORMATION on Allis-Chalmers motors for indoor and outdoor service — complete with Allis-Chalmers coordinated control — from your nearby A-C Authorized Distributor or District Office, or write for Bulletins 51B7286 and 51B7149, Allis-Chalmers, Milwaukee 1, Wisconsin.

A-4133

ALLIS-CHALMERS

▲ For more details circle NED-785 J3 on enclosed inquiry slip ▲

ARO 1000 pound AIR HOIST



SPEED...
Lift rate . . . over 40 ft. per minute!
SIZE...
Overall length 10¼" weighs only 28½ lbs.
SAFETY...
Betters all safety requirements!
Write for full details.
The Aro Equipment Corporation
Bryan, Ohio
Offices in All Principal Cities
In Canada—Aro Equipment of Canada, Ltd. Toronto, Ont.

ARO AIR HOIST
Also . . . Air Tools . . . Lubricating Equipment . . . Aircraft Products . . . Grease Fittings

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Striping is easy

GRAVITY MARKER A low cost model for marking aisles, loading zones, parking lots. Paints sharp, clear lines 2", 3" or 4" wide on any surface. Protects employees from danger.

ECONO-LINER spray paints continuous or skip lines 2" to 6" wide. Adjustable, free-floating paint guides follow contour of any surface. Converts to a portable spray rig for painting.

Paints lines within ⅛" of fixed objects or stacked cartons.
Paints sharp, clear lines on concrete, wood block, black top, brick or any surface.

UNIVERSAL MFG. & SALES CO.
5211 Pacific Blvd., Huntington Park 1, Cal.

ECONO-LINER GRAVITY

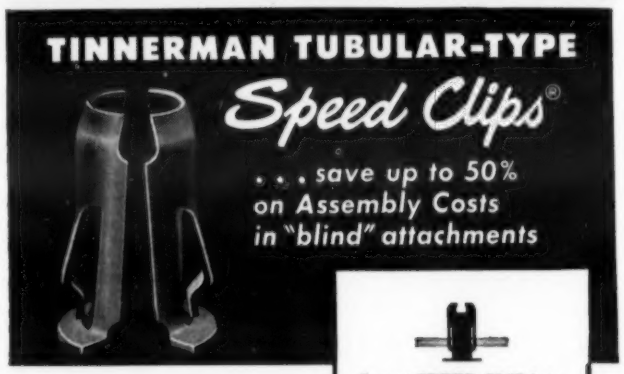
Mark-Rite LINE MARKERS

For more details circle NED-787 J3 on enclosed inquiry slip

TINNERMAN TUBULAR-TYPE

Speed Clips®

. . . save up to 50% on Assembly Costs in "blind" attachments



Tubular type SPEED CLIPS provide fast, efficient, vibration-proof attachments. They are used with unthreaded studs, or rivets; are available in a wide range of sizes. Snapped into place by hand, they virtually nail panels together. An ideal fastener where only one side of the assembly is accessible; perfect for attaching name plates, grilles, decorative trim. See your local Tinnerman representative for full information on Tinnerman SPEED NUT Brand Fasteners, or write direct to:

Insert SPEED CLIP into hole; Spring Steel prongs compress, then spring out after fully inserted, holding Clip in position.

Line up second part of assembly and start rivet into SPEED CLIP.

Seated rivet is engaged as turned-in end of SPEED CLIP "bites" rivet to lock it securely.

TINNERMAN PRODUCTS, INC.
Dept. 12, Box 6688, Cleveland 1, Ohio

For more details circle NED-788 J3 on enclosed inquiry slip

OVER 4000 TYPES OF PRECISION ENGINEERED

DARNELL CASTERS

for light, medium or heavy duty service

Always SWIVEL and ROLL

Free MANUAL

DARNELL CORPORATION, LTD.
DOWNEY (LOS ANGELES COUNTY) CALIFORNIA
60 WALKER STREET, NEW YORK 13, NEW YORK
36 NORTH CLINTON STREET, CHICAGO 6, ILLINOIS

For more details circle NED-789 J3 on enclosed inquiry slip

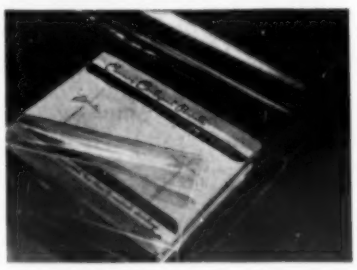
New Processes & Materials

IMPROVED INSULATING TAPE is silicone rubber coated glass cloth

Newly developed type SE-100 silicone rubber coating compound for standard Class H type 76510 glass cloth tape and wrapper affords a flexible insulation not susceptible to cracking for heavy electrical equipment. It can be bent over a ⅛-in. mandrel at −60° C, and will not soften or flow at 315° C. Other properties include tensile strength of 130 lb per inch of width, good abrasion resistance and low water absorption. Product is available in widths to 36 in. and in thickness from 7 to 17 mils. The 10-mil grade has a typical dielectric strength of 1200 v per mil at room temperature and 1175 at 85° C. Sixty cycle power factor at 100° C is 0.72 per cent. Made by **General Electric Co.**, Laminated & Insulating Products Dept., 1 Plastics Ave., Pittsfield, Mass.

For more details circle NED-790 J3 on enclosed inquiry slip

TEXTILE PACKAGING FILM is durable, heavy-duty type



Suited to shelf and storage conditions of textile retailing, type 600 MS-3 plastic film is said to be the strongest Cellophane ever made. Designed primarily for packaging such large and weighty textiles as sheets, blankets, table cloths, bedspreads and towels, it can be used equally effectively to give luxurious appearance and durability to packages for smaller items. It consists of a toughened base film, treated with a coating permitting an extra-strong heat seal. It takes printing well and is completely transparent. Made by **American Viscose Corp.**, Sylvania Div., Market Development, Dept. NED, 1617 Pennsylvania Blvd., Philadelphia 3, Pa.

For more details circle NED-791 J3 on enclosed inquiry slip

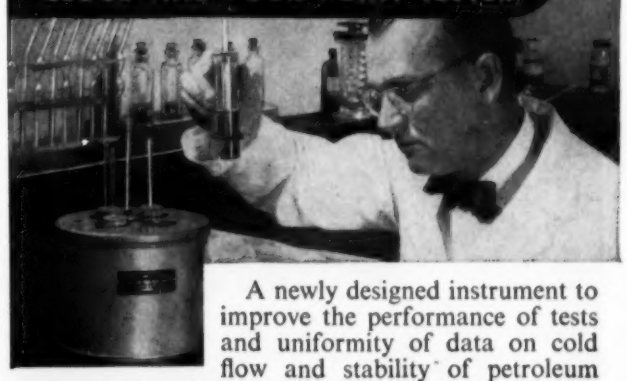
CARBIDE TOOL MATERIAL is well suited to heavy roughing

Developed originally for rough shell turning operations, grade 434 carbide has been found suitable for rough turning and making interrupted cuts on all types of steel and armor plate. On centrifugally cast 309B stainless steel, feeds ranging from 0.015 to 0.068-in. per revolution, speeds from 68 to 600 sfpm and cut depths from ⅛ to 1¼-in. have been used with good results. Made by **Adamas Carbide Corp.**, 1000 S. Fourth St., Harrison, N. J.

For more details circle NED-792 J3 on enclosed inquiry slip

MORE EFFECTIVE TESTS FOR COLD FLOW AND STABILITY with the *improved*

FISHER/TAG
CLOUD AND POUR POINT TESTER



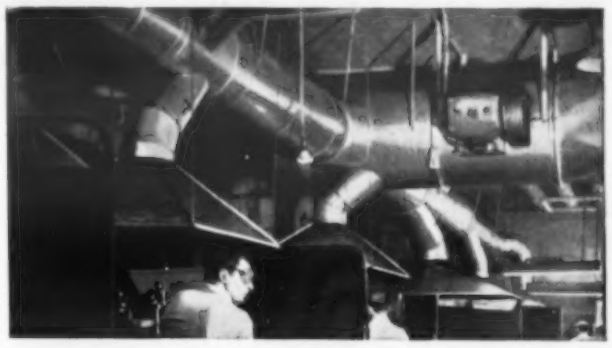
A newly designed instrument to improve the performance of tests and uniformity of data on cold flow and stability of petroleum oils. Designed to conform with specifications of ASTM D 97.

Has improved insulating cover with large opening for ice or CO_2. Labtone finish protects the insulated bath against corrosion.

Write for booklet FS-209-FF for more information on Fisher/Tag Cloud and Pour Point Tester and other petroleum testing equipment.

FISHER SCIENTIFIC
717 FORBES ST. PITTSBURGH 19, PA.

For more details circle NED-793 J3 on enclosed inquiry slip



brighten your production picture with HARTZELL Air-Moving Equipment

Put Hartzell's wealth of experience with fume, smoke and heat troubles to work on *your* problem. Canopies, properly fan or blower powered, over die-casting machines, acid tanks and other air-fouling equipment, can work wonders.

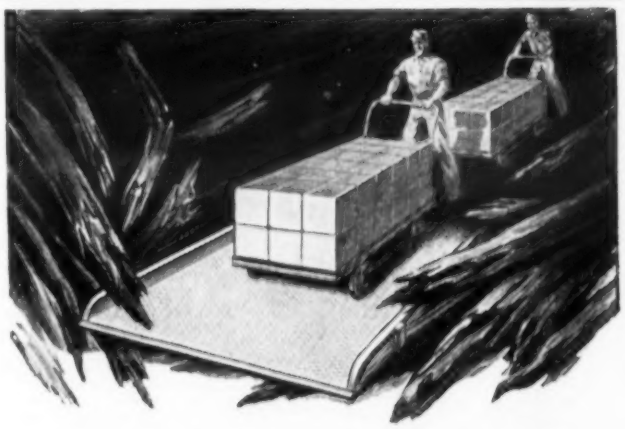
The Hartzell installation pictured above cured a real production headache.

But be sure the installation is *right*. *Cure* the trouble; don't experiment with it. Call in the organization which has the know-how and puts a specialist — the Hartzell field engineer — right in your backyard to bring you that know-how fast and dependably. Phone him now . . . or drop a card to us.

HARTZELL propeller fan co.
Div. of Castle Hills Corp.
Dept. G. PIQUA, OHIO

ENGINEERING OFFICES IN PRINCIPAL CITIES

For more details circle NED-794 J3 on enclosed inquiry slip



BREAK THE ROADBLOCKS to Faster, Lower-Cost Loading

Now!—*without capital expenditure*—clear away the costly bottlenecks in loading operations! Flash the green light to your shipping and receiving departments by speeding up the movement of trucks in and out of all loading areas. Like many other leading companies, you, too, can effect substantial cost savings and greatly increase loading capacity by installing Magliner Magnesium Dock Boards. To get the benefits of fast, smooth, low-cost loading investigate magnesium *light*, magnesium *strong* Magliners for your docks today.

MAGLINER *MAGNESIUM* DOCK BOARDS
Now Available in 34 Standard Models

These low-cost units are now available in 34 standard models, capacity-rated up to 2,000 lbs. (axle load). Constructed like a bridge, these Standard Magliner Boards insure absolute mechanical safety to men, equipment and load. Because Magliners are easily handled by one man, many commercial carriers use them as standard equipment in trucks to speed up transfer operations at all loading stops. Write today for information bulletin DB-203.

MagLiner MAGNESIUM DOCK BOARDS

LIGHT STRONG SAFE..

WRITE FOR INFORMATION BULLETIN DB-203

Custom-Engineered Dock Boards are Also Available —Write for Information.

MAGLINE INC. • P.O. BOX 396 • PINCONNING, MICHIGAN

For more details circle NED-795 J3 on enclosed inquiry slip

HIGH AND LOW TEMPERATURES

NEW BENCH-TYPE TEST UNIT

WEBBER

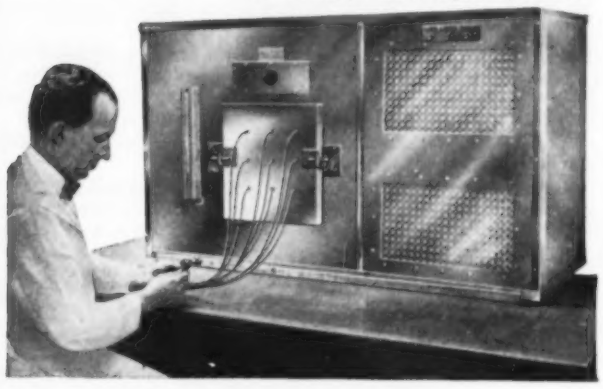
TRADE MARK REGISTERED

COMPLETE TEMPERATURE RANGE

TESTING UNITS

Combine high and low temperatures within the same cabinet with all controls self contained. Unit measures 50"x28"x20" with a testing chamber 12"x12"x12". Temperature range is from -80° F., to 185° F. Heat application is accomplished with reverse cycle refrigeration, which eliminates the hazards associated with open heating elements. A blower is provided for even distribution of temperatures and greater testing accuracy. Latch-type or hinge-type door optional. Accelerated pull-down to -80° in 30 minutes or less.

Write today for more complete information



INDUSTRIAL FREEZER DIVISION
WEBBER MANUFACTURING COMPANY, INC.
(Formerly Webber Appliance Co., Inc.)
2749 MADISON AVENUE · INDIANAPOLIS 3, INDIANA

For more details circle NED-796 J3 on enclosed inquiry slip

THERE IS AN R-B-M CONTROL To Fit Your Needs

A.C. MAGNETIC STARTERS with Plasti-Clad Magnet Coil

Write for Bulletin 605

Full accessibility in a small package.

Contacts, coil and thermal element replacement with use of screwdriver only. Magnet coil—in molded phenolic case with riveted terminals—is completely embedded in a rock-hard resinous material, thus protecting against oil, dirt, moisture and normal mechanical damage.

HERMETICALLY SEALED RELAYS

Write for Bulletin ASR

50% smaller—lighter.

R-B-M 22204-0 meets AN 3304-1 specifications. R-B-M engineers have developed the 22300-0 currently used in government electronic, air-borne and ground equipment—as the electrical and mechanical equivalent of the AN 3304-1, yet 50% smaller in size with ½ the weight.

INDUSTRIAL CONTACTORS with Plasti-Clad Magnet Coil

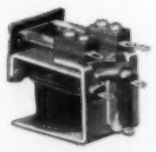
Write for Bulletin 600

2-8 poles Non-Reversing. 2-5 poles Reversing. 25 Amp—600 AC Max.

Contacts can be replaced without removing wiring. To change coil, remove magnet frame and coil assembly only. 10 and 15 amp. poles can be changed from normally open to normally closed by using screwdriver only.

GENERAL PURPOSE RELAYS

Write for Bulletin 570



Low cost. Small size. Dependable performance. Available in many contact arrangements.

Whatever your needs for inexpensive, dependable relays for commercial applications—investigate R-B-M General Purpose Relays.

Other R-B-M products include; motor overload protectors, motor starting relays and low voltage DC electrical devices.

Consult R-B-M on Your Control Problems — Write Dept. K-9

RBM

R-B-M DIVISION
ESSEX WIRE CORP.
Logansport, Indiana

MANUAL AND MAGNETIC ELECTRIC CONTROLS
—FOR AUTOMOTIVE, INDUSTRIAL, COMMUNICATION AND ELECTRONIC USE

For more details circle NED-797 J3 on enclosed inquiry slip

New Literature & Catalogs

Vacuum Impregnation

F. J. Stokes Machine Co.—Revised edition of 24-page brochure 760 on "Vacuum Impregnation" details wide range of applications for this process of filling voids in porous materials with a desired impregnant after air and moisture have been evacuated. Range of equipment for this process is described, and specifications for standard cylindrical and rectangular impregnating chambers, tanks and vacuum pumping units are given.

For more details circle NED-798 J3 on enclosed inquiry slip

Machining Glass-Bonded Mica

Mycalex Corp. of America—"From One Machinist to Another" is 23-page illustrated reference and operation manual which tells how to machine glass-bonded mica so as to retain advantage of its unique engineering properties. Its four sections give the general picture, do's and don'ts, troubles you will not have and data on performing specific operations.

For more details circle NED-799 J3 on enclosed inquiry slip

Welded Floats

W. H. Nicholson & Co.—Spherical, elliptical and cylindrical welded floats made from stainless steel, Monel and plated steel are subject of 8-page descriptive bulletin 753. Sizes 2 to 14 in. diameter for pressures from vacuum to 4800 psi are made. Prices, weights, buoyancy and collapsing pressure information is tabulated.

For more details circle NED-800 J3 on enclosed inquiry slip

Electrical Insulation Tester

James G. Biddle Co.—The Midget Megger electrical insulation tester for testing insulation resistance of most types of electrical apparatus is subject of 8-page bulletin 21-85. Unit features its own built-in hand generator. Ratings up to 50 megohms, 500 v dc are available.

For more details circle NED-801 J3 on enclosed inquiry slip

Heating Coil Catalog

Young Radiator Co. — General descriptions and construction data, as well as selection and dimension information relative to heating coils is contained in 36-page catalog No. 4553. It includes valuable piping, installation and specification details clearly and completely illustrated. Both steam and hot water types are covered.

For more details circle NED-802 J3 on enclosed inquiry slip

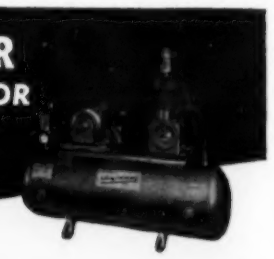
Safety Rules Manual

"Working Together for Safety" is title of the National Safety Council's new employee rules manual, a pocket-size, 32-page booklet which lists practical safe work habits applicable to employees in most plants. Special attention is given to machine operation, hand tools, power tools, protective clothing, fire prevention and materials handling.

For more details circle NED-803 J3 on enclosed inquiry slip

IF YOU USE AIR IN YOUR PRODUCT OR IN YOUR PLANT

Look to



Kellogg-American

FOR COMPRESSOR PUMPS

Soundly designed, highly efficient. Precision built to deliver more *free air per hp.* Standard units available for pressures up to 200 p.s.i. Single or two stage, one or two cylinders.

FOR COMPLETE AIR COMPRESSORS

Known over 40 years for their efficiency, long life, quiet, economical operation. Available in sizes from ¼ hp through 10 hp. Portable or stationary, skid or tank-mounted, electric motor or gas engine-driven models.

Write for Bulletin K-307-N

AMERICAN Brake Shoe COMPANY

KELLOGG-DIVISION
ROCHESTER 9, N. Y.

Kellogg-American

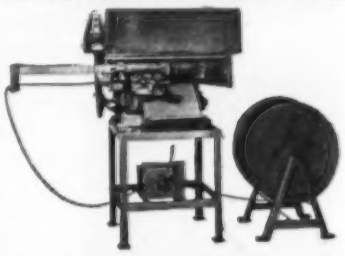
AIR COMPRESSORS PAINT SPRAY EQUIPMENT

For more details circle NED-804 J3 on enclosed inquiry slip

Measure, Cut and Strip Insulated Wire

IN ONE SPEEDY OPERATION

ON ARTOS *Automatic* MACHINES



Does your production require cutting and stripping of insulated electric wire, cord, cable, etc.?

You can produce finished leads *much faster* . . . as many as 3000 per hour in 15-in. lengths . . . on this Artos Automatic Machine. Substantial time savings are obtained over the best manual or semi-automatic methods.

Operation is fully automatic—wire is taken from the reel, measured, cut to length and stripped at one or both ends. Unskilled help can handle the machine. Set-up is easy for different wire types and lengths.

MODEL CS-6E CAPACITY

FINISHED PIECES PER HOUR—From 3000 per hour up to 15 in. lengths to 500 per hour in 64-97 in. lengths.
MAXIMUM STRIPPING LENGTH—1½ in. at each end (greater stripped lengths are special).
MAXIMUM CUTTING LENGTH—97 in.
MINIMUM CUTTING LENGTH—2 in. (also as short as ⅛ in. under certain conditions).
TYPES OF WIRE HANDLED—Solid or stranded single conductor wires, parallel cord, heater cord, service cord, etc.
MAXIMUM WIRE SIZE—No. 10 stranded or No. 12 solid.

Other Artos Machines

The complete line of Artos automatic wire cutting and stripping machines will handle *cut lengths* from 1 in. to 60 ft., *stripped lengths* to 6½ in. at one end and 8½ in. at the other, *wire* from No. 12 to No. 000 gauge, and up to 3600 pieces per hour. Ask for recommendations on your problems.

WRITE FOR BULLETIN

Get the complete story—write for Bulletin 35-C on Artos Model CS-6 machines.

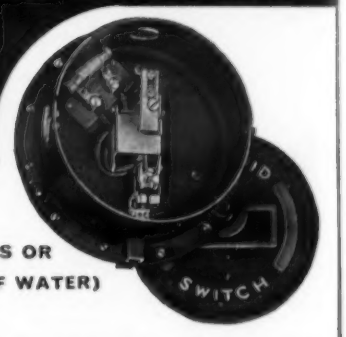
ARTOS ENGINEERING CO.
Automatic Wire Cutting and Stripping

2751 S. 28th St. • Milwaukee 46, Wis.

For more details circle NED-805 J3 on enclosed inquiry slip

DIFFERENTIAL PRESSURE CONTROLS FOR LOW PRESSURES

MERCURY SWITCH EQUIPPED



FOR AIR OR GAS (INCHES OR FRACTION OF INCHES OF WATER)

TO OPEN OR CLOSE AN ELECTRICAL CIRCUIT ACCORDING TO A MINUTE CHANGE IN THE DIFFERENCE BETWEEN TWO PRESSURES OR VACUUMS

Mercoid Type PPQ Diaphragm Differential Pressure Controls operate from minute changes (.03" water) in the difference between two pressures.

Ranges to cover most applications (inches of water) 6" vacuum to 6" pressure, and 30" vacuum to 30" pressure. Available for various circuit arrangements.

Electrical Capacity—0.3Amp. at 115V., A.C. or 0.15 Amp., at 230V., D.C. Can be furnished in explosion-proof or weather-proof cases.

WRITE FOR BULLETIN CA-3P

THE MERCOID CORPORATION
4201 BELMONT AVE., CHICAGO 41, ILLINOIS, U.S.A.

For more details circle NED-806 J3 on enclosed inquiry slip

NOW... P&H ZIP-LIFT

A NEW "ZIP"

*with Rope Control**

ONLY $199.50

Yes, it's here — the famous P&H Zip-Lift Electric Hoist with an amazing new price tag of *only* $199.50.

New have these advantages —

• *Wire Rope Hoisting*
No troublesome chains or hidden weaknesses! You get free, easy handling with wire rope — and wide range of side pulls, too.

• *New Rope Control*
Handling is simpler with P&H's unique control designed for fast "one-hand" operation.

• *25% Overload Capacity*
This extra safety factor gives an overload margin up to one-fourth above rated capacity during intermittent usage.

Call your nearby P&H dealer and learn about the latest handling short cuts. He'll show you where and how to cut costs with a "Zip".

Handle it "Thru-the-Air" faster — at lower cost

*Push button control also available as optional equipment

P&H HOIST DIVISION
HARNISCHFEGER CORPORATION
MILWAUKEE 46, WISCONSIN

For more details circle NED-807 J3 on enclosed inquiry slip

FIRST FIND OUT ALL THE DOWN TIME

Make every machine now work harder and produce more. How? Well, the first step is to find out if any valuable time is now being wasted by machines *standing idle* at odd moments. And the way to do *that* is to clamp a little SERVIS RECORDER on each one of your machines. Then you'll get the whole story—see chart above. Write for our folder—"*A Busy Plant.*" The Service Recorder Co., 1375 Euclid Ave., Cleveland 15, Ohio.

The Servis Recorder
SHOWS UP ALL IDLE TIME!

▲ For more details circle NED-808 J3 on enclosed inquiry slip ▲

nylon
MAINTENANCE PARTS...
FAST...without mold costs!

Now, when you need maintenance parts fast...and these parts call for the advantages of nylon (light weight, wear resistance, heat and corrosion resistance)—you can make them quickly, *with no mold cost!*

POLYPENCO nylon standard shapes are the answer. Ideal for gears, bushings, bearings, insulating shafts, washers, etc. Available in rod, strip, tubing. Easily fabricated on standard metal working tools. Quick delivery from stock. Write for bulletin, listing technical information or prices. The Polymer Corporation of Pennsylvania, Reading, Penna.

POLYPENCO® NYLON
nylon and teflon* / stock shapes...finished parts
also available to your specifications
In Canada: C-H Engineering Company • Montreal • Toronto
*registered trademark of the Du Pont Company

▲ For more details circle NED-809 J3 on enclosed inquiry slip ▲

One Complete Unit for All Small Parts Cleaning

MANPRO B-121
VAPOR DEGREASER

- Absolutely eliminates fire hazard.
- Cleaning cycle is 50 seconds!
- Capacity — 500 lbs. steel per hour.
- 6 kw. 220v single phase. Standard water connection for double condensers.
- Pressure spray for stubborn dirt.
- Work clearance 31" long, 20" wide, 16" deep.
- PRICE complete: $534.00 FOB Detroit.

• Save Man-Hours. Save needless handling and moving of parts and assemblies. Degrease on the spot with MANPRO Vapor Degreaser.

Convenience means efficiency!

See it in operation! Booth 2460, Oct. 19. Cleveland Metals Show.

Manufacturers Processing Co.
1360 HILTON RD. • DETROIT 20, MICH.

▲ For more details circle NED-810 J3 on enclosed inquiry slip ▲

New Processes & Materials

PLASTIC SHEET MATERIAL
"alloy" of polystyrene and rubber fabricates easily, has many uses

A copolymer of polystyrene and rubber, Campco S-300 is a rigid plastic sheet material available in any desired color in widths ranging from 26 to 58 in., and in thicknesses from 0.005 to 0.125-in. It is fabricated by extrusion through continuous equipment and has a smooth surface and a finish which can be regulated from matte through high gloss. It machines easily, has high impact strength and lends itself to the simple vacuum forming process. It is also light in weight, requires no expensive finishing operations, can be easily cleaned and is moisture-resistant.

Illustration shows a typical application, where a refrigerator door liner has been vacuum formed from the basic sheet shown at the right. Other applications include ducting, interior roofing, paneling, tote boxes, wall tile, lighting fixtures, reflectors and illuminated signs. The material takes print and paint well and can be vacuum coated with aluminum or silver. Made by **Chicago Molded Products Corp.**, Campco Div., 2719 N. Normandy Ave., Chicago 35, Ill.

▲ For more details circle NED-811 J3 on enclosed inquiry slip ▲

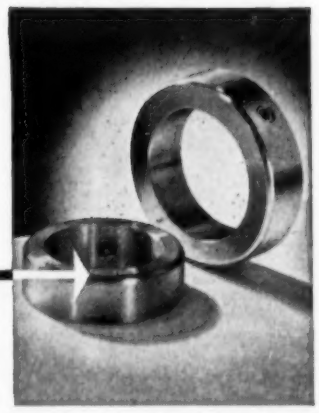
ELEVATOR & CONVEYOR CHAIN
design gives added wearing metal

With as much as six times the usual amount of wear surface on each link, this combination chain is designed to give long service life on bucket elevators and conveyors. Block links are cast either of malleable iron or Beauco-CR metal. Side bars are of high carbon steel. Connecting pins of forged steel are used with the malleable iron chain, and heat-treated steel pins with the alloy chain. This design will replace other standard types. Made by **Beaumont Birch Co.**, 1508 Race St., Philadelphia 2, Pa.

▲ For more details circle NED-812 J3 on enclosed inquiry slip ▲

standardize on standard

HALLOWELL®
SOLID STEEL COLLARS



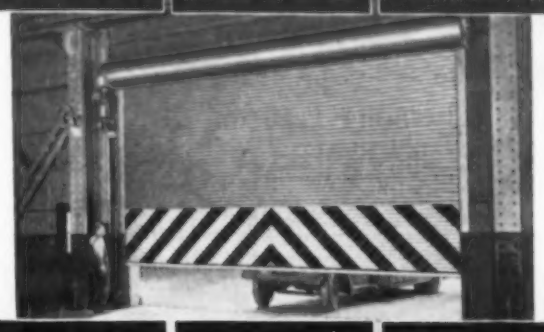
now size-marked for easy identification

42 stock sizes—each marked with shaft diameter for easy identification—are now available at your HALLOWELL distributors'. And these precision machined solid steel collars—in sizes from 3/16" to 3" inclusive—have the famous self-locking UNBRAKO Socket Set Screw to assure positive positioning on the shaft. Write for literature and the name of your nearest HALLOWELL distributor. STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

Our Fiftieth Year : A START FOR THE FUTURE
HALLOWELL POWER TRANSMISSION DIVISION
SPS
JENKINTOWN PENNSYLVANIA

▲ For more details circle NED-813 J3 on enclosed inquiry slip ▲

All ceiling space is clear—for hoists, conveyors, ducts, etc. | Clears the entire opening, stays out of reach of damage. | Door rises straight upward—completely out of the way.



Steel jambs anchor curtain against wind or storm damage! | Rugged, all-metal resistance to fire, storm or intrusion. | All floor and wall space around door always fully usable.

Above are only a few features that have made Kinnear Steel Rolling Doors top choice for efficiency, long low-cost service and extra protection—*through more than half a century.* Kinnear Rolling Doors are built to fit any opening, in old or new buildings. Motor or manual control. Send today for your copy of the new Kinnear catalog on doors for every need.

Kinnear Steel Rolling Doors

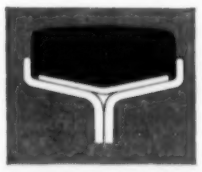
Saving Ways in Doorways
KINNEAR ROLLING DOORS

The KINNEAR Mfg. Co.
3017 Fields Avenue
Columbus 16, Ohio

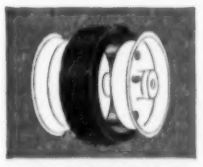
▲ For more details circle NED-814 J3 on enclosed inquiry slip ▲

AT LAST! something REALLY NEW in industrial wheels...
Rapistan's MB

The first STEEL BASED rubber tire demountable wheel



Live rubber tread is bonded for life to band of steel. Cannot slip, stretch or creep. Neoprene available at no extra cost.



Just four bolts to loosen for tire replacement. One-piece hub assembly with felt-sealed roller bearings, extra-large grease reservoir, steel hubcap.

Now it's a fact. A tested fact! A demountable wheel with a thick, live rubber tire *bonded to a band of steel!* A wheel that gives you the performance of a molded-on rubber type . . . the quality of a high-priced pressed-on industrial type . . . and the economy of a demountable type wheel.

Your savings add up to 30%

The MB wheel costs about 10% less than the average molded-on wheel. But you really save money when the tire is worn. You don't discard the wheel. You don't ship it back for retread. You simply replace its steel-bonded tire quickly and inexpensively. Result—a whopping 30% saving compared to molded-on rubber wheels.

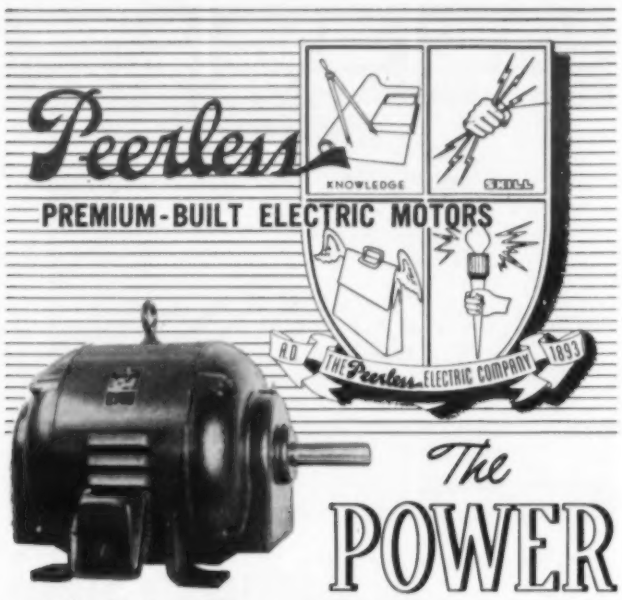
Proved beyond 28 doubts!

Gruelling laboratory "punishment" tests, and comparative service tests conducted for six months in 28 leading plants have proved the Rapistan MB is *it*—superior beyond doubt. The results of these tests are yours for the asking. Write for the facts and judge for yourself.

SEND ME PROOF
Send me test results and comments of test-users concerning the MB Wheel. Also specifications and prices on sizes now available.

The RAPIDS-STANDARD CO., Inc 82 Rapistan Bldg., Grand Rapids, Mich.
Rapistan®
Fastest Growing Name in Casters
Representatives in Principal Cities
Name
Firm
Address
City Zone State

▲ For more details circle NED-815 J3 on enclosed inquiry slip ▲



The POWER that builds reputations.

Quality equipment producers protect themselves and you with Peerless premium-built electric motors.

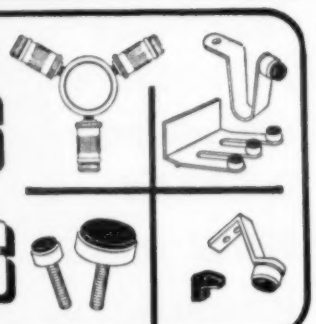
Peerless Motors are expertly designed for these jobs . . . built by men skilled in their work . . . men who know the value of efficient, friendly service. The Peerless name . . . a name that for 60 years has stood as a symbol of quality and performance.

THE PEERLESS ELECTRIC COMPANY

MOTORS FANS BLOWERS — Peerless Electric — 1415 W. MARKET ST. WARREN, OHIO

▲ For more details circle NED-816 J3 on enclosed inquiry slip ▲

SILVER GRAPHALLOY BRUSHES AND CONTACTS



. . . for applications requiring low electrical noise, low and constant contact drop, high current density and minimum wear.

GRAPHALLOY TRADE MARK REG. U. S. PAT. OFF.

EXTENSIVELY USED IN

SELSYNS • ROTATING THERMOCOUPLE and STRAIN-GAGE CIRCUITS • ROTATING JOINTS GUN-FIRE CONTROLS • DYNAMOTORS etc.

Wide range of grades available for standard and special applications.

Brush holders and coin silver slip rings available for use with Silver Graphalloy Brushes.

Write us for Data Sheets and further information. Outline your problem and we will apply our "40 years' experience" toward its solution.

OTHER GRAPHALLOY PRODUCTS:

Oil-free self-lubricating Bushings and Bearings, Oil-free Piston Rings, Seal Rings, Thrust and Friction Washers, Pump Vanes.

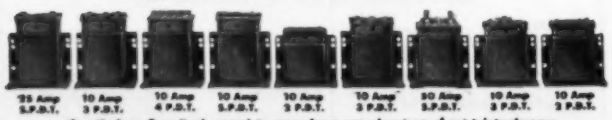
GRAPHITE METALLIZING CORPORATION
1030 NEPPERHAN AVE • YONKERS, NEW YORK

▲ For more details circle NED-817 J3 on enclosed inquiry slip ▲

for every plane... GUARDIAN® APPROVED Interchangeable AIRCRAFT RELAYS

Standard spacing of mounting bracket holes is the "master key" to complete *interchangeability* of these highly reliable Guardian Aircraft Relays. Other bracket dimensions vary only between back plates and terminals on face plates. Units range from S.P.S.T. (time delay available), to 4 P.D.T., with open-type mounting or sealed to MIL-R—6106 specifications. Many available to the new M.S. specifications. Weights range from 7.5 ounces to 20.8 ounces. Get complete *flexibility* of control at the design, modification and retrofit stages. Your copy of Bulletin 1 A-R tells how. Write.

NOTE THE PRECISE ALIGNMENT OF MOUNTING HOLES!



Specify from Guardian's complete range for every advantage of quick interchange!

GUARDIAN ELECTRIC
1626-K W. WALNUT STREET CHICAGO 12, ILLINOIS
A COMPLETE LINE OF RELAYS SERVING AMERICAN INDUSTRY

▲ For more details circle NED-818 J3 on enclosed inquiry slip ▲

New Literature & Catalogs

Fabricated Aluminum Parts

Reynolds Aluminum Fabricating Service — Some of the many fabricated aluminum parts being purchased today by leading appliance manufacturers are described and pictured in 16-page FP-104. Shearing, roll forming, drawing, blanking, welding and finishing operations are also explained.

▲ For more details circle NED-819 J3 on enclosed inquiry slip ▲

Standard Thread Gages

Detroit Tap & Tool Co.—Prices and tolerances of standard thread gages are listed in 20-page bulletin SG-53. Thread plug, thread ring and thread setting plug gages for machine screw and fractional thread sizes are included. Types and uses are discussed, and tables listing W, X and Y tolerances for gages up to 1½ in. are incorporated in bulletin.

▲ For more details circle NED-820 J3 on enclosed inquiry slip ▲

Sprockets & Roller Chain

Dodge Mfg. Corp.—Information offered on Taper-Lock sprockets for chain sizes from No. 40 to 100 includes cross section drawings, dimensions, number of teeth, list prices, sprocket and bushing numbers, stock bore, weight and price of chain in that size. Data is also given on both riveted and cotter type roller chains, plus information for chain drive selection.

▲ For more details circle NED-821 J3 on enclosed inquiry slip ▲

Measurement of Noise

Consisting of over 100 pages, "Handbook of Noise Measurement" thoroughly covers the measurement of airborne sounds and includes definitions, standards, measuring equipment, procedures and interpretation of results. Authors are Dr. A. P. G. Peterson of General Radio Engineering staff and Dr. L. L. Baranek, Technical Dir., Acoustics Laboratory, M.I.T. Copies are available for $1.00 postpaid from General Radio Co., Massachusetts Ave. & Front St., Cambridge 39, Mass.

▲ For more details circle NED-822 J3 on enclosed inquiry slip ▲

Transformers

Chicago Standard Transformer Corp.—In the 24 pages of this 1953 illustrated catalog are 25 new units, including 13 television components and 5 transistor transformers. Complete electrical and physical specifications on almost 500 transformers for a wide variety of applications are listed in it. Prices and mounting type descriptions are included.

▲ For more details circle NED-823 J3 on enclosed inquiry slip ▲

Drill Jig Bushings

Colonial Bushings, Inc.—Dimensioned drawings of all standard drill jig bushings and liners, with sizes and tolerances in table form for all sizes, are found in 12-page illustrated catalog and price list B-649-A.

▲ For more details circle NED-824 J3 on enclosed inquiry slip ▲

FOR DEFENSE INDUSTRY MACHINIST WORKMAN FARMER

1ST IN METAL TOOL BOXES

CASES—CHESTS—CABINETS

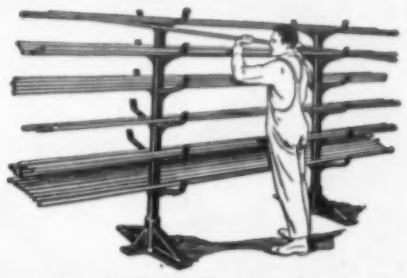
Here are the world's finest metal boxes. They're better constructed—better looking. Known for their fine materials—workmanship—attractive design. These boxes outlook—outlast—outsell competition. Write for FREE book, including complete information.

WATERLOO METAL BOXES AND CHESTS

Waterloo VALVE SPRING COMPRESSOR CO. WATERLOO, IOWA

▲ For more details circle NED-825 J3 on enclosed inquiry slip ▲

for EFFICIENT HANDLING and ORDERLY STORAGE



You save time, both in storing and in issuing, when you use Brown Sectional Racks. Open sides speed handling. Complete visibility permits quick selection to save waiting mechanics time.

Maximum flexibility in arrangement is possible because each Brown Rack is independent and self-contained, need not be bolted to floor. Easily relocated. Systemized storage with Brown Racks promotes good housekeeping, cleanliness.

All iron and steel construction, can't burn, bend, sag or warp. Never wear out.

Get these values now! Write for complete specifications and prices on wide range of models and sizes. Brown Engineering Co. 129 N. Third St., Reading, Pa.

BROWN QUICK-SERVE RACKS

▲ For more details circle NED-826 J3 on enclosed inquiry slip ▲

step up to the safety level

Dayton Safety Ladders pay their own way. The "safety level" working platform makes high jobs "ground-safe" — helps prevent costly ladder accidents. Check the "big 6" features that make Dayton your best buy.

1. Rail guarded "safety level" platform.
2. Locks in place automatically.
3. Rubber safety shoes.
4. Light weight—great strength.
5. Economically priced.
6. Complete size range 3' to 16' in height.

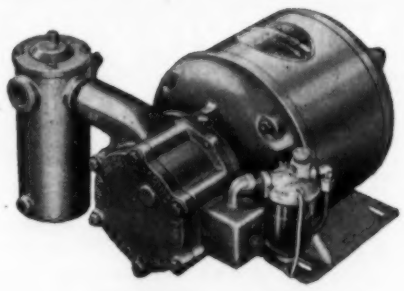
Write Dept. E for Bulletin

Dayton safety ladders — Dayton safety ladder co. 2339 Gilbert Ave., Cincinnati, O. In Canada— SAFETY SUPPLY CO., TORONTO

▲ For more details circle NED-827 J3 on enclosed inquiry slip ▲

USE THIS COMPACT MOTOAIR PUMP FOR VACUUM

AVAILABLE IN SEVERAL SIZES



NO BELTS • NO COUPLING • DIRECT DRIVE makes it MORE COMPACT!

No other pump packs such dependable vacuum in so compact a space. It's complete with motor. Plug in and use. Visible, circulating lubrication.

● Write for Catalog—

823

NEW JERSEY MACHINE Corporation

FACTORY SALES AND SERVICE BRANCHES CHICAGO CINCINNATI LOS ANGELES

1550 WILLOW AVENUE, HOBOKEN, N. J.

▲ For more details circle NED-828 J3 on enclosed inquiry slip ▲

To the man who is
WORRIED
about the cost of his product

PERHAPS your worry is caused by doubt. Doubt that *all* known paths to lower costs have been explored.

Have you had "the Titchener Test" applied to your product?

On request—and without cost or obligation on your part—Titchener engineers will scrutinize your products to determine whether Welded Wire or Wire-and-Strip assemblies can be substituted for higher-priced components now being used.

Over 200 firms have already discovered that Wire Parts are strong, attractive, less expensive replacements for castings, forgings, sheet steel, tubing, or stampings.

Why not investigate this possibility now? Send prints or samples. If you would rather "look before you leap"—let us send you our free 20-page handbook, "Use of Wire Construction in Product Design." Write to: E. H. Titchener & Co., 102 Clinton St., Binghamton, N. Y.

For more details circle NED-829 J3 on enclosed inquiry slip

450% INCREASE IN CYLINDER PRODUCTION

when prominent manufacturer switched to

SUNNEN HONING

PROBLEM: Step up production of high pressure (5000 psi) grease pump cylinder.

MATERIAL: Nitralloy • HOLE DIAMETER: .504" + .00005" − .00000"
HOLE LENGTH: 2" • HARDNESS: Rockwell 63 "C"
STOCK REMOVAL: .001" • FINISH: 3 micro-inches RMS

SOLUTION: MBB Precision Honing Machine with standard K16 honing unit, using 220 grit alundum abrasive stone and Sunnen MAN-844 Honing Oil. Semi-skilled labor is used.

RESULTS: 45 parts per hour, including gaging time—a 450% increase obtained by switching the job from lapping to honing. And, parts are straight and round, with a better seal between the cylinder and the piston. The production rate is highly satisfactory considering that the tolerance allowed is only 50 millionths.

You'll find Sunnen Honing Machines economical for job lots or long production runs . . . for everything from de-burring to micro-fitting. They are frequently the solution to production problems that cannot be handled by drilling, reaming, boring, lapping or grinding.

These machines generate geometrically perfect holes with fast stock removal . . . produce a guaranteed accuracy of .0001" or better and surface finish to 2 micro-inches RMS . . . have a diameter range of 1/8" to 2 5/8" . . . require no jigs or fixtures. Average installation costs less than $1,000.

TYPICAL HONED PARTS

Cast iron hydraulic cylinder — Steel worm gear — Bronze motor bearing

Sunnen Honing Machines may be *your* answer, too.

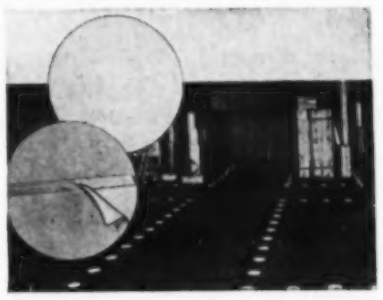
Send for FREE BOOKLET 723A

SUNNEN PRODUCTS COMPANY
7968 Manchester Avenue, St. Louis 17, Missouri
Canadian Factory: Chatham, Ontario

For more details circle NED-830 J3 on enclosed inquiry slip

New Processes & Materials

AISLE MARKERS are plastic and self-adhesive



Available in red, yellow, green and white, these self-adhesive plastic aisle markers have 2, 3, 4, or 5-in. diameters, and are mounted on a paper liner to protect the adhesive until used. Directional arrows are also available in the same sizes. Markers offer several advantages, including ease of application and removal. They can be applied by unskilled help, and lie flush with the floor without offering any traffic obstruction. They are durable and abrasion-resistant, and are unaffected by acids, oil, grease, salts, water and most common solvents. Made by **W. H. Brady Co.**, Dept. 334, 727 W. Glendale Ave., Milwaukee 12, Wis.

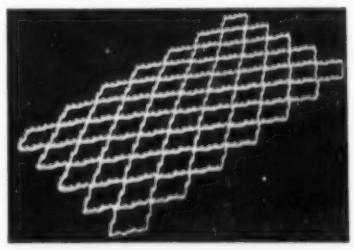
For more details circle NED-831 J3 on enclosed inquiry slip

RUBBER FILM can be electronically seamed

Combining the properties of synthetic rubber and plastics, Vulcafilm is a variable-composition type film which can be fabricated by an electronic seaming process into any size or shape of vessel or sheet. It can be combined with fabric reinforcement and varied in composition to resist oil, gasoline, sunlight, heat, cold, abrasion and acids. Typical applications include use as oil storage tank diaphragms; for preventing evaporation, filling losses and corrosive attack on tank walls and top; and as inflatable pillow to bolster freight loads. Made by **B. F. Goodrich Co.**, Dept. E, 500 S. Main St., Akron 18, O.

For more details circle NED-832 J3 on enclosed inquiry slip

NONSKID GRILLES for safe footing in oil or snow



These lightweight Coroweld nonskid grilles, adaptable to assembly of platforms, catwalks and stair treads, are made in various sizes. Method of assembly, plus engineered spacing of contact points assures safe walking and firm footing in grease, oil, snow and sleet. Made by **Bustin Firm-Grip Grating Corp.**, 111 E. 130th St., New York 37, N. Y.

For more details circle NED-833 J3 on enclosed inquiry slip

Hundreds of PROFITABLE USES for—

Use these versatile flexible shaft tools for all kinds of shop work including die sinking, polishing, reaming, grinding and similar jobs. They're quickly and easily coupled to any electric motor with 3/8" or 1/2" diameter spindles.

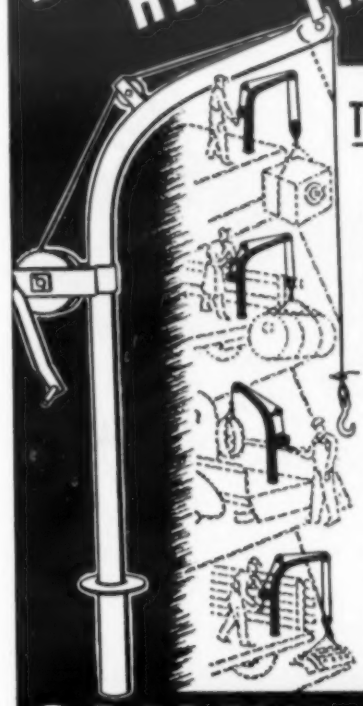
They come in two sizes. The 700 Series for precise, delicate work use .092" shank diameter tools. The 500 Series for heavy duty service use tools with shank diameters up to 1/4".

WRITE FOR THIS CATALOG. CATALOG T-51 describes Flexarms and many other S. S. White tools for industry. Send for your copy today.

THE S. S. White INDUSTRIAL DIVISION
DENTAL MFG. CO. Dept. 7, 10 East 40th St. NEW YORK 16, N. Y.
WESTERN DISTRICT OFFICE: Times Bldg., Long Beach, Calif.

For more details circle NED-834 J3 on enclosed inquiry slip

BLUE HERON TRUCK CRANE SAVES



Time Money Labor

ONE MAN can handle up to ONE TON—EASILY and SAFELY!—with a BLUE HERON TRUCK CRANE. Crane swivels through full circle; one man can lift from socket, leaving truck body clear.

Equip ALL company trucks with sockets. Then change cranes from truck to truck.

CHOOSE THE MODEL WHICH FITS YOUR REQUIREMENTS
Model O.C. 30A Cap. 500#
Model O.C. 30B Cap. 1000#
Model O.C. 30C Cap. 2000#

CAM TOOL CO., INC. 11 RANDWICK AVE. OAKLAND 11, CALIF.

For more details circle NED-835 J3 on enclosed inquiry slip

Pay Dirt

Sweep your floors the Parker Sweeper way and floor dirt becomes pay dirt. A Parker Sweeper is 400% faster than inefficient pushbrooms. It reduces "taken-for-granted" sweeping expenses by surprising amounts. Sweeps and collects in one operation. Easily pushed . . . easily emptied. Ideal for all businesses from small garage to large factory.

Full details in big descriptive bulletin. Write PARKER SWEEPER COMPANY, 69 BECHTLE AVE., SPRINGFIELD, OHIO.

PARKER FLOOR SWEEPERS
Manual and Motorized Models

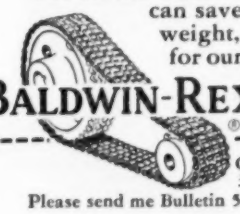
For more details circle NED-836 J3 on enclosed inquiry slip

SAVE 2 WAYS on Chain Drives and Conveyors

This Book Shows You How

With Baldwin-Rex Double Pitch Roller Chain, you save both cost and weight without sacrificing the high quality of standard roller chain. Where speeds are slow to medium, loads are moderate and centers are long, Double-Pitch is often the economical choice.

For all the details on how this precision chain can save you important money and weight, just use the coupon to send for our free Double-Pitch Bulletin.



BALDWIN-REX ROLLER CHAINS

Chain Belt Company 53-409
364 Plainfield St., Springfield 2, Mass.

Please send me Bulletin 51-2.

Name.....
Company.....Dept.....
Address.....
City.....State.....

For more details circle NED-837 J3 on enclosed inquiry slip

Veteran users of wire rope know the money-saving advantages of Electroline fittings:

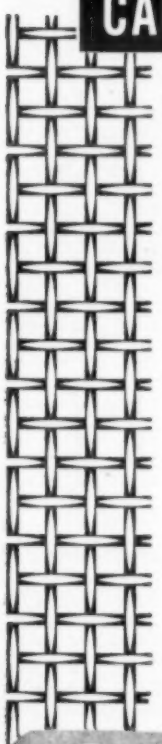
- **Prolongs Rope Life**—damp vibration stresses and overcomes rope fatigue at fitting entrance, where rope usually wears.
- **Safety**—no need for heat, solvent or acid, no hazard for men.
- **Easy Application**—ordinary labor can make the connection.
- **Strength**—stronger than the rope it is attached to.

Electroline Company
4121 South La Salle Street
CHICAGO 9, ILLINOIS
In Canada: Powerlite Devices, Ltd., Toronto

Send for the Electroline catalog —32 pages, illustrated, pocket size; full of useful information.

For more details circle NED-838 J3 on enclosed inquiry slip

CAL-WIC WIRE CLOTH



THE RIGHT WEAVE

• • • for every industrial requirement including screening, filtering, grading, cleaning and numerous other types of processing.

THE RIGHT WEIGHT

• • • precision-fabricated for long-lasting dependability and economy.

THE RIGHT METAL

• • • for highest resistance to chemical action, moisture, corrosion, abrasion and extremes of temperature.

For additional information write or phone our nearest sales office.

EAST: Wickwire Spencer Steel Division, Clinton, Mass.
WEST: The Colorado Fuel and Iron Corporation, Denver, Colorado
PACIFIC COAST: Pacific Coast Division, Oakland, California

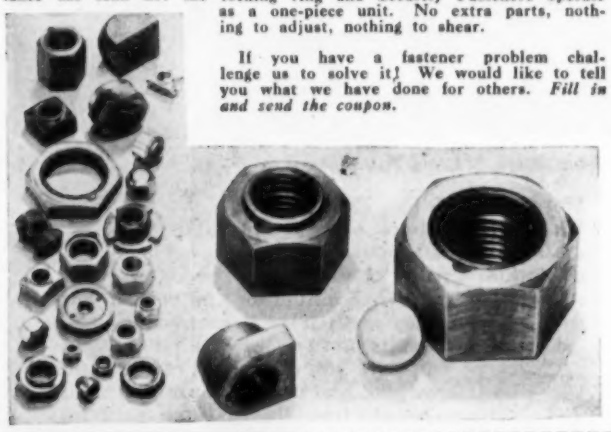
CAL-WIC CFI
INDUSTRIAL SCREENS
THE COLORADO FUEL AND IRON CORPORATION

For more details circle NED-839 J3 on enclosed inquiry slip

SPECIAL Fastener Problems Take Special Experience

THE illustration shows just a few of the many special Security Fasteners made in a wide variety of sizes and metals. Security Locknuts and Fasteners hold in *any* position on the bolt. They can be removed and replaced any number of times without damaging the bolt or without loss of locking effect. The fastener body takes the load not the locking ring and Security Fasteners operate as a one-piece unit. No extra parts, nothing to adjust, nothing to shear.

If you have a fastener problem challenge us to solve it! We would like to tell you what we have done for others. *Fill in and send the coupon.*



Security

THE NUT YOU CAN'T SHAKE LOOSE

Please send me without obligation:
☐ A Thread Tolerance Chart.
☐ We have a fastener problem and would like to know more about Security Locknuts.

SECURITY LOCKNUT CORP.
1510 North Ave.
Melrose Park, Ill.

Company Name .....
Address .....
Town ..... Zone ..... State .....
Signed .....

For more details circle NED-840 J3 on enclosed inquiry slip

New Literature & Catalogs

Carbon-Graphite Products

United States Graphite Co. — Information about Graphitar, a versatile engineering material for seals, bearings, end plates, valves, piston liners, and other parts is contained in 66-page illustrated and wire-bound catalog GT-54. Properties and characterisitcs, manufacturing techniques, limitations and design tolerances, plus engineering drawings and application data are included.

For more details circle NED-841 J3 on enclosed inquiry slip

Spacing Devices

Hartford Special Machinery Co. — Basically a heavy turret on which is mounted a hardened and ground index plate and a self-centering chuck or other work holding means, Super Spacer 8 and 12-in. models are described and illustrated in 12-page bulletin S-103. It explains how, with furnished mask plates, milling, drilling, grinding, boring and other jobs can be performed. Photos show applications for many operations.

For more details circle NED-842 J3 on enclosed inquiry slip

Packaged Automatic Boilers

Orr & Sembower, Inc.—Seventeen sizes of Powermaster packaged automatic boilers from 15 through 500 hp for steam process as well as steam and hot water heating service are described in 16-page bulletin 1219. Constructional and operational advantages, plus cutaway views and other data are included.

For more details circle NED-843 J3 on enclosed inquiry slip

Decorator Flock

Cellusuede Products, Inc.—Wide variety of uses and methods of application of decorator flock are described in illustrated 12-page bulletin. Information for design and application engineers is included. Various types of flock fibers, their range of uses, adhesive selection and application and other data are compiled in the bulletin.

For more details circle NED-844 J3 on enclosed inquiry slip

Motors, Generators, Etc.

Arthur Wagner Co.—Called the Wagner Motor-Gram, this first issue of a 6-page newsletter lists current availabilities in new and rebuilt electric motors and generators, plus transformers, speed reducers and other products. Condensed specifications are given.

For more details circle NED-845 J3 on enclosed inquiry slip

Pipe Tools & Machines

Beaver Pipe Tools, Inc.—Condensed 8-page quick reference catalog covers entire line of pipe and bolt threaders, square end sawing vises, pipe reamers, power and hand cutters and pipe and bolt machines. Prices are included.

For more details circle NED-846 J3 on enclosed inquiry slip

This executive scoffs at the idea that he is gambling with his company's future.

Despite official records of weekend fires, burglaries and vandalism—he feels *it* can't happen to *his* plant.

Be *sure* of plant protection on weekends as well as week days—by modernizing with a GUARDSMAN Watchclock System. The DETEX GUARDSMAN assures unbroken mechanical Watchman supervision — keeps him alert during plant closings when no one is around to watch him. Saves you needless overtime. Write for free folder today.

DETEX
PATROL
ALERT
ECO
NEWMAN
GUARDSMAN
WATCHMENS CLOCKS
DETEX WATCHCLOCK CORPORATION
Dept. N-9
76 VARICK STREET, NEW YORK 13, N. Y.
Sales and Service in All Principal Cities

For more details circle NED-848 J3 on enclosed inquiry slip

SAFE
HERMAN NELSON
PORTABLE AIR HEATERS

Get safe heat, efficient heat, wherever you want it. Say goodbye to winter slowdowns with Herman Nelson Portable Air Heaters. There is absolutely no danger from carbon monoxide, no smoke, no fumes, no sparks. Combustion products are vented off—clean, pure, heated air is directed to the working area—through flexible canvas ducts. Models available from 125,000 to 450,000 BTU. Oil or gasoline fired. Electric or gasoline powered.

Get all the FACTS about ALL Portable Heaters. Write American Air Filter Company, Inc., Dept. 112, Moline, Illinois.

For more details circle NED-849 J3 on enclosed inquiry slip

Now Ready!

NEW CATALOG ON TUTHILL MODEL CK HIGH PRESSURE PUMPS

For Designers

For Production and Maintenance Men

Write for this new Tuthill Model CK Catalog No. 103.

It's a helpful guide to selecting the right pump for hydraulic service where the operating pressure does not exceed 400 p.s.i. Included is complete data on mechanically-sealed units and automatic reversing types in capacities from 5 to 200 g.p.m.

A copy is yours for the asking.

TUTHILL PUMP COMPANY
Dependable Rotary Pumps since 1927
939 East 95th Street, Chicago 19, Illinois

Canadian Affiliate: Ingersoll Machine & Tool Company, Ltd. Ingersoll, Ontario, Canada

For more details circle NED-847 J3 on enclosed inquiry slip

FASTER, SAFER LOADING

New adjustable hydraulic ramp for loading docks

The new Leva-Dock Ramp travels up or down automatically to keep on the level with vehicle bed. Thus you can quickly load and unload trucks and trailers without using loose plates, bridge ramps or other slow and dangerous methods. This hydraulic ramp compensates 4 ways for varying truck bed heights, out-of-level trucks and spring deflection. An automatic safety device prevents accidents.

The Leva-Dock is powered by a dependable hydraulic jack and power unit. Simple to install, inexpensive to operate.

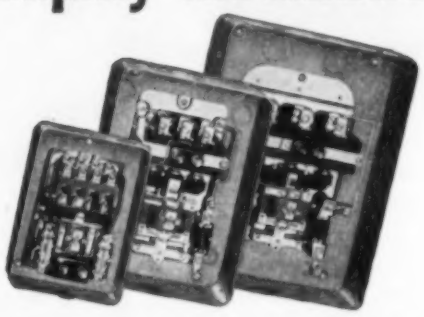
WRITE FOR CATALOG RE-402

Rotary **Leva-Dock® Ramps**

Rotary Lift Co., 1098 Kentucky, Memphis 2, Tenn.

For more details circle NED-850 J3 on enclosed inquiry slip

Compact motor starters simplify installation



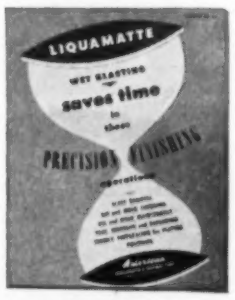
The compact unit construction of Ward Leonard a-c across-the-line magnetic starters makes installation easy. Complete accessibility of all parts simplifies inspection. They are designed with high current interruption capacity and for long, trouble-free operating life.

Open types for machine tool and panel builders or enclosed types as shown are available in seven NEMA sizes, from 1 to 200 hp. Order now for immediate delivery. Or write for Starter Bulletin 4110. Ward Leonard Electric Co., 51 South Street, Mount Vernon, N. Y.

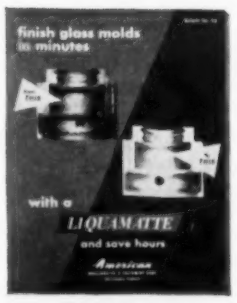
WARD LEONARD ELECTRIC CO.
Result-Engineered Controls Since 1892
RESISTORS • RHEOSTATS • RELAYS • CHROMASTER

▲ For more details circle **NED-851 J3** on enclosed inquiry slip ▲

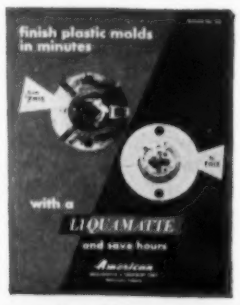
how to cut precision finishing costs



Save Time on Tools, Dies, Molds. Bulletin 43



Save Time on Glass Molds Bulletin 53



Save Time on Plastic Molds. Bulletin 63

The bulletins illustrated above show how tools, dies, molds, engine parts, etc. requiring 1 to 6 hours to finish by hand methods are now finished in from 30 seconds to 10 minutes in a Liquamatte Wet Blasting machine. They explain how manual operations are practically eliminated as dies, molds and cutting tools are cleaned and/or finished to tolerances of .0001".

Take the first step towards reducing your finishing costs and send for one or more of these bulletins today.

American LIQUAMATTE WET BLASTING
WHEELABRATOR & EQUIPMENT CORP.
508 S. Byrkit St. Mishawaka, Ind.

▲ For more details circle **NED-852 J3** on enclosed inquiry slip ▲

New Literature & Catalogs

HIGH TEMPERATURE COATING withstands up to 5000° F.

Sprayed like paint, Pyrolock quick-drying insulation makes the treated surface capable of withstanding temperatures as high as 5000° F. A 1/16-in. coating protects against flame temperatures hotter than the melting point of metals for 10 seconds. Water base inorganic material is nontoxic, nonflammable and nonexplosive, and sandblasting or use of surface primers are not required to make it adhere to clean metal surfaces. Dried layer bonds itself to metal with a strength that withstands sharp impact short of actual deformation of the base metal. Material is resistant to most solvents and chemicals and also indefinitely withstands temperature cycles of −60 to 165° F. Made by **B. F. Goodrich Co.,** Industrial Products Div., Dept. E, 500 S. Main St., Akron 18, O.

▲ For more details circle **NED-853 J3** on enclosed inquiry slip ▲

PIPE LINING PROCESS prevents abrasion and corrosion and also materials contamination

For protecting flange ends and inner flow surfaces of metal pipes against corrosion, abrasion or contamination, this lining process can be used to apply soft or hard natural rubber, neoprene and other compounds. After pipe is treated with a priming solution and a cement, a tube of the desired coating compound is inserted and adhered under pressure. When the flange ends are to be coated, steel molds set at a predetermined thickness are inserted about 2 in. into the pipe and bolted to the flanges. An 8-hour vulcanizing treatment then accomplishes both molding and curing. Trimming completes the process.

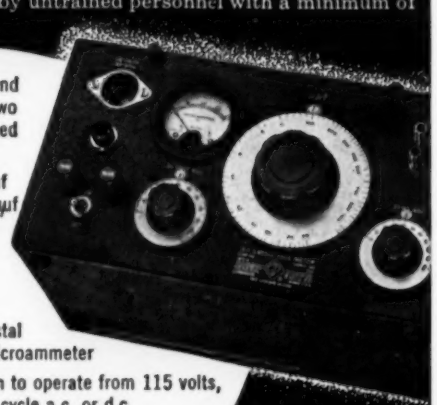
This method prevents the coating from raising at pipe coupling points and offering obstruction to material flow or rupturing. The bond is reported to be inseparable, since the coating is resilient enough to accommodate pipe expansion and contraction under maximum temperature variations. Process can also be applied to equipment and materials other than pipes to obtain similar results. Developed by **Goodall Rubber Co. of Texas,** 3550 W. Twelfth St., Houston, Tex.

▲ For more details circle **NED-854 J3** on enclosed inquiry slip ▲

To Measure CAPACITANCE at RADIO Frequencies

Rapidly ☆ Conveniently ☆ Accurately

The Type 1612-A Capacitance Meter is used both in the laboratory and in production for rapid measurements of capacitance from 0 to 1200 μμf. It is very simple to use and can be operated by untrained personnel with a minimum of instruction.



Range: 0 to 80 μμf, and 0 to 1200 μμf, in two automatically-selected ranges

Accuracy: 0.4 or 4 μμf below 10 and 100 μμf and 4% above 10 and 100 μμf

Frequency: Fixed at 1 Mc

Detector: Internal crystal with microammeter

Power Supply: Built-in to operate from 115 volts, either 60-cycle a.c. or d.c.

Price: $170

Write for Complete Data

General Radio Company
275 Massachusetts Ave., Cambridge 39, Massachusetts
90 West Street NEW YORK 6 — 920 South Michigan Avenue CHICAGO 5 — 1000 North Seward Street LOS ANGELES 38

▲ For more details circle **NED-855 J3** on enclosed inquiry slip ▲

SELLERS

HYDRAULIC JET CLEANER

LEAST EXPENSIVE TO BUY & OPERATE — **MOST EFFECTIVE FOR HEAVY DUTY CLEAN-UP**

Operated by ordinary plant steam and cold water lines, this unit propels a solid jet of extremely high pressured hot water and detergent. The discharge force completely cleans areas up to 30 ft. from operation point, reaching inaccessible machinery parts. Eliminates down time and scaffolding. Removes all soil, sludge, and encrusted deposits.

CUTS CLEANING COSTS UP TO 94%

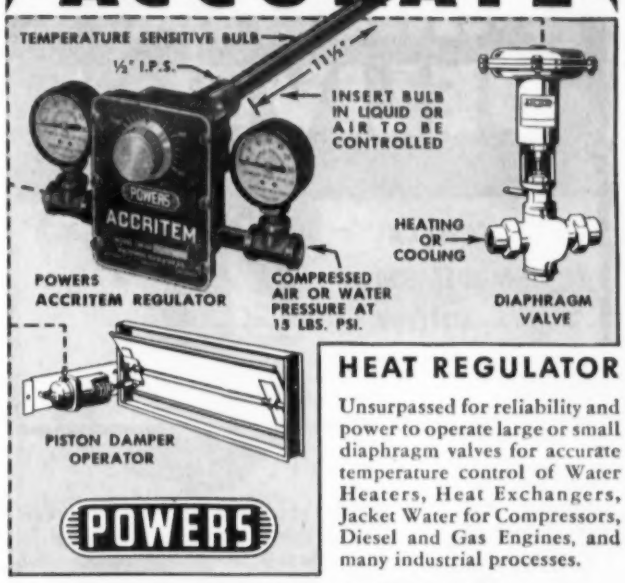
FOR ANY PLANT WITH 5 PSI STEAM & UPWARD

Write for literature and the name of our local distributor

SELLERS *Injector* CORPORATION SINCE 1848
1600 Hamilton Street Philadelphia 30, Pa.

▲ For more details circle **NED-856 J3** on enclosed inquiry slip ▲

ACCURATE



HEAT REGULATOR

Unsurpassed for reliability and power to operate large or small diaphragm valves for accurate temperature control of Water Heaters, Heat Exchangers, Jacket Water for Compressors, Diesel and Gas Engines, and many industrial processes.

IMPORTANT FEATURES

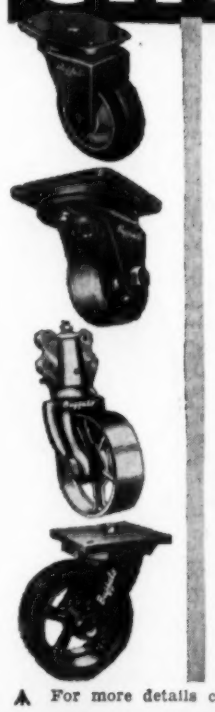
● ***Adjustable Sensitivity*** and over-heat protection. ● ***Calibrated Dial*** temperature adjustment. ● ***Ranges*** 50 to 250° F. and 150 to 350° F. ● ***Simple, Rugged Construction*** withstands vibration and insures many years of reliable service. Requires 15 lb. supply of compressed air or water for its operation. ● ***Small Size*** — regulator head is only 2⅞" x 3⅝". Write for Bulletin 316. (a76)

THE POWERS REGULATOR CO., 3437 Oakton St., Skokie, Ill.

60 Years of Temperature and Humidity Control • Offices in Over 50 Cities

▲ For more details circle **NED-857 J3** on enclosed inquiry slip ▲

Buffalo CASTERS



light, medium and heavy duty . . . for every need

There are Buffalo Casters to meet the requirements of your particular load, floor or job. A complete line of rigid, swivel, cone stem and trailer casters—with steel, rubber-tired, pneumatic or cushion wheels—sturdily built to give you long years of dependable, trouble-free service. Before you buy any casters, compare the selection and values offered by Buffalo.

BUFFALO CASTER & WHEEL CORP.
1032 Broadway, Hamilton, Illinois

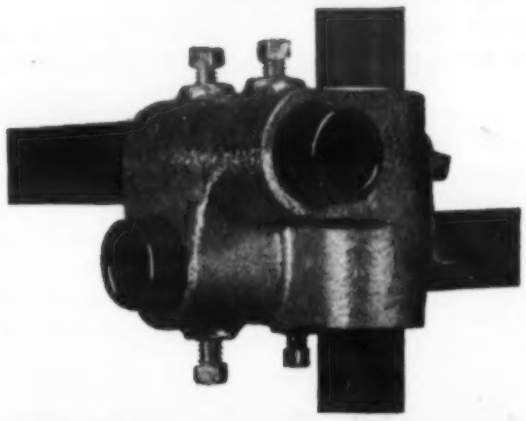
SEND COUPON FOR FREE CATALOG

Buffalo Caster & Wheel Corp., Dept. 12
1032 Broadway, Hamilton, Illinois
Without obligation please send me complete information about Buffalo Caster and Wheels.

NAME_____
FIRM_____
ADDRESS_____
CITY_____ STATE_____

▲ For more details circle **NED-858 J3** on enclosed inquiry slip ▲

MAKE YOUR OWN SCAFFOLDS AND RACKS WITH PIPE



FOR MAINTENANCE AND CONSTRUCTION

Safe, durable, adjustable, rolling and frame scaffolds for ALL jobs.

FOR ADJUSTABLE STORAGE RACKS

Material racks, pallet racks, bench frames and portable bleachers are also erected with:

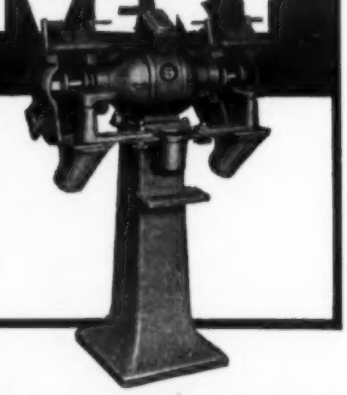
AMIDON FITTINGS

and standard pipe • pictures available

AMIDON ENGINEERING CO., Elyria 20, O.

For more details circle NED-859 J3 on enclosed inquiry slip

IMMEDIATE DELIVERY



U. S. ELECTRICAL TOOL MODEL 500 UTILITY FLOOR GRINDERS

Totally enclosed motors, ball-bearings in dust-tight housings, ruggedly constructed base and frame, for heavy-duty service. Push button starters, with overload protection. Available in five sizes 1 to 5 H.P., 220/440 volts, 60 cycles, 2 or 3 phase. Write today for name of Distributor and catalog No. US 24.

United States Electrical Tool Division

THE EMERSON ELECTRIC MFG. CO.

1050 Findlay St., Cincinnati 14, Ohio

For more details circle NED-860 J3 on enclosed inquiry slip

REDUCE COSTS ON "SMALL-WORK" GRINDING & FINISHING JOBS with

Foredom FLEXIBLE SHAFT MACHINES

- FEATHER - WEIGHT, finger-tip-controlled handpiece (pencil size or larger) which eliminates operator fatigue.
- CHOICE OF 5 HANDPIECE TYPES (all instantly interchangeable). You fit the handpiece to the job at hand.
- EXTRA GOOD FLEXING QUALITIES in the flexible shaft assembly for effortless maneuverability.
- LONGER MOTOR LIFE because motor is not dwarfed to fit the hand.
- HIGH SPEED (14000 RPM) which does not drop precipitately under load.
- SILENCER-EQUIPPED flexible shaft for vibration-free performance.

Over 100,000 Foredoms Now In Use!

BENCH OR HANG UP MODELS FOR HEAVY OR LIGHT DUTY

Also flexible-shaft tools attachable to your own drill press or motor

Use Foredoms to GRIND, POLISH, DRILL, ROUT, CARVE, MILL, SAW, SLOT, CLEAN, SAND, ETCH, ENGRAVE, etc., etc.

Write for Catalog 5264

FOREDOM Electric Co., Dept. 5264 27 Park Place, N.Y.7, N.Y.

For more details circle NED-861 J3 on enclosed inquiry slip

New Literature & Catalogs

Air Control Valves

Mechanical Air Controls, Inc.—Wire-bound illustrated catalog of 36 pages, designated No. 53, contains descriptions, specifications, cross sectional drawings and parts lists for wide variety of air control valves. Included are solenoid, foot, cam, pilot pressure and hand-operated valves, pilot and line mounted valves. Each type is offered in a variety of styles.

For more details circle NED-862 J3 on enclosed inquiry slip

Special Contract Facilities

Hartford Special Machinery Co.—In the 12 pages of illustrated brochure E-201 are described the equipment and skills available at this company for contract manufacturing of a wide range of products. Typical products built included glass container machinery, ball bearing grinders, printing machinery, textile and plastics machines, machine tools and packaging machinery.

For more details circle NED-863 J3 on enclosed inquiry slip

Industrial Thermometers

Precision Thermometer & Instrument Co.—Both mercury-in-glass and bimetallic industrial thermometers are featured in 16-page illustrated bulletin E-2. Technical data, construction details and various available forms of each type are included.

For more details circle NED-864 J3 on enclosed inquiry slip

Fork Lift Trucks

Buda Co.—"Driver's eye view" of operation, construction and servicing features of Buda FT series fork lift trucks, plus a description of the company's entire materials handling line is found in 36-page illustrated "Fork Lift Truck Fact Book." Eighteen models with gasoline engines and an equal number with diesel engines are covered, along with optional equipment.

For more details circle NED-865 J3 on enclosed inquiry slip

Custom Molded Rubber Parts

Stillman Rubber Co.—Facilities for producing a wide range of custom molded parts, including thermolastic and synthetic rubber O-rings, Teflon O-rings, Teflon back-up rings and hydraulic packings to commercial and government specifications are covered in 24-page illustrated catalog. Engineering and design data, installation recommendations, dimensional data, etc., are included.

For more details circle NED-866 J3 on enclosed inquiry slip

Projection Welder

Sciaky Bros., Inc.—EPT 2 series air-operated, press type, three-phase electric resistance projection welder is described and illustrated in 2-page bulletin 305-1. It is made in 50, 75 and 100 kva models at 50 per cent duty cycle with 12, 18 and 24-in. throat depths. Operation is described.

For more details circle NED-867 J3 on enclosed inquiry slip

in your HANDY pocket-size Abart CATALOG specifications, diagrams and performance data on Abart Gearmotors—right angle type: 1/6 to 5 hp. . . . ratios 5-4/5 to 1 up to 100 to 1 . . . output speeds from 17.5 to 302.0 rpm.

Your copy is free upon request—write today!

There's an efficient, compact Abart Gearmotor to fit your particular needs.

ABART GEAR and MACHINE CO.

4826 WEST 16th STREET • CHICAGO 50, ILLINOIS

Also Mfrs. of Gears and Speed Reducers

For more details circle NED-868 J3 on enclosed inquiry slip

Snappy Action Valves

CRANE Cam and Lever QUICK OPENING BRASS GATES

for fast, positive action on steam, water, oil or air lines

You can turn fluids on and off in a snap with this Crane valve. It works on a smooth cam and lever principle, with solid wedge disc. Raises disc fully and seats tightly with no effort; never jams. Made to stand hard usage. Underwriters' approved for hazardous liquids up to 50 pounds pressure. Screwed or bolted cap, depending on size. For further information, ask your Crane Representative or see your Crane Catalog.

WORKING PRESSURES

Up to 125 pounds saturated steam; 200 pounds cold water, oil, or gas, depending on size.

Screwed Ends only. Sizes: ½ to 3 in.

Air Tested.

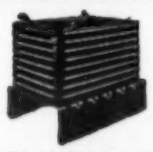
CRANE CO., 836 S. Michigan Avenue, Chicago 5, Ill.

Branches and Wholesalers Serving All Industrial Areas

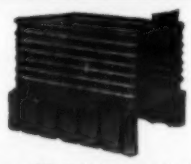
CRANE Everything for Every Piping System

VALVES • FITTINGS • PIPE • PLUMBING AND HEATING

For more details circle NED-869 J3 on enclosed inquiry slip



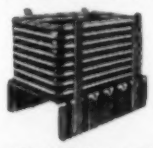
Type PB-120T box and platform with tiering lugs.



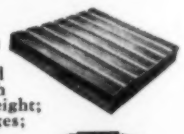
Type PB-650 box and platform units with sliding end door.

Now...Specify Republic STEEL BOXES & SKIDS

Same "Truscon-type" steel boxes and skids you've always known and used. Now, they have a new name: "REPUBLIC". Same ability to carry the load and keep things moving. Same ability to produce savings for you in all phases of materials movement. Backed by the same experience, engineering ability, and efficient production experience. Fully described in free illustrated catalog.



Type PB-120L box and platform units with full length lifting lugs.



Double-Face Steel Pallets—rigidity and strength with minimum weight; no sharp edges; three styles.

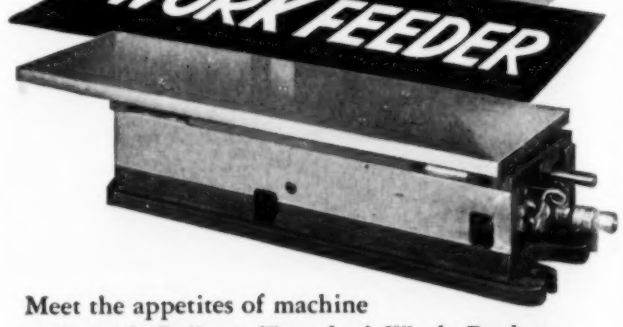
PRESSED STEEL DIVISION

REPUBLIC STEEL CORPORATION

6206 TRUSCON AVE. • CLEVELAND 27, OHIO

For more details circle NED-870 J3 on enclosed inquiry slip

Bellows Transfeed WORK FEEDER



Meet the appetites of machine tools with Bellows Transfeed Work Feeders. Complete, air-powered, electrically controlled 2-station feeder . . . with auxiliary table for light milling operations. Transverse action powered by full 6" stroke, permitting loading or unloading at one end of table while operation occurs at other end. Control may be by push-button, foot switch, or by interlock with the machine tool.

WRITE FOR BULLETIN NED 953

The Bellows Co. AKRON 1, OHIO

810A

For more details circle NED-871 J3 on enclosed inquiry slip

Another Arm-The NO. 40
CIRCLE TEMPLATE

$1.00 AT YOUR LOCAL DEALER

.030 MATTE FINISH MATHEMATICAL QUALITY DOUBLE-CURED PLASTIC. ALL HOLES SMOOTH-MILLED TO ENGRAVING MACHINE ACCURACY.

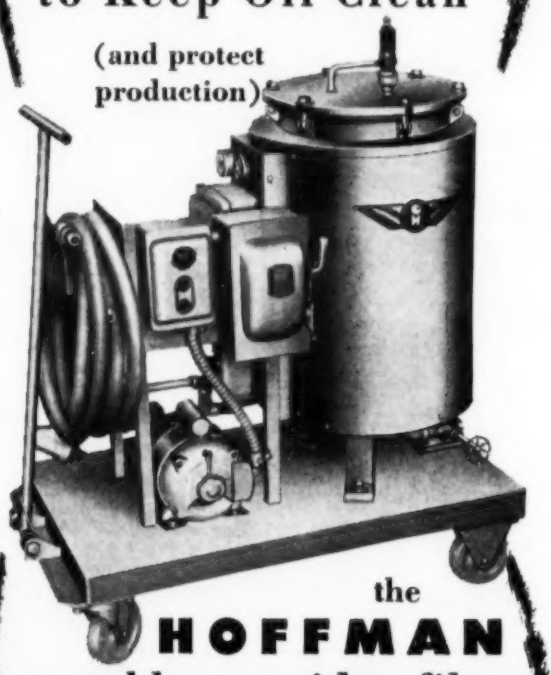
ONE OF MORE THAN 30 RAPIDESIGN TIME-SAVER TEMPLATES—ALL OF WHICH ARE BETTER MADE, MORE USEFUL AND LESSER PRICED.

CATALOGUE NO. 49 AVAILABLE UPON REQUEST

RAPIDESIGN INC.
P. O. BOX 592 GLENDALE, CALIF.

For more details circle NED-872 J3 on enclosed inquiry slip

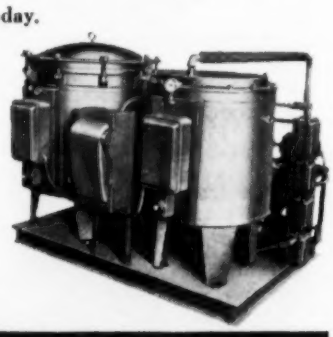
GOES ANYWHERE
to Keep Oil Clean
(and protect production)



the HOFFMAN
portable cartridge filter

Fills the need for periodic, scheduled filtration of oils where quantity does not warrant separate, continuous filtration. Easily moved from one machine to another. Flexible hose with quick connecting couplings attaches to the oil supply of the machine. Operates on a recirculation basis for such time as is required to fully recondition the oil. For use on hydraulic oils (hydraulic presses, hydraulic machine tools, injection moulding machines, die casting machines) and quench oils. Two sizes: 30 and 60 g.p.h. capacities for repackable or throwaway cartridges. Fuller's earth or cellulose.
Write for Bulletin A-916 today.

For Complete Purification of Used Oils —
HOFFMAN OIL CONDITIONER
25 to 600 g.p.h. capacity
Removes solubles and insolubles
Write for free Bulletin A-667



TOPS IN VALUE SINCE 1905 Hoffman
INDUSTRIAL FILTRATION EQUIPMENT & SERVICE
U. S. HOFFMAN MACHINERY CORP., 225 LAMSON STREET, SYRACUSE 6, N. Y.
In Canada: Canadian Hoffman Machinery Co., Ltd., Newmarket, Ont.

For more details circle NED-873 J3 on enclosed inquiry slip

New Processes & Materials

ELECTROFORGED GRATING improves highway-railroad crossings

Convenience and safety to users of highway - railroad crossings is assured by this electroforged grating. Besides improving road for traffic, this easily installed grating protects ties and allows sunshine and air to dry up moisture that otherwise would cause rotting. Grating is removable, and tamping around ties can be readily done. Photo shows 168 ft of grating installed on the railroad siding of a Pennsylvania tool plant. Siding is crossed by autos, trucks and pedestrians and is designed for H-20 loading or maximum weight of 20 tons. Made by **Blaw-Knox Co.,** Dept. NED, Farmers Bank Bldg., Pittsburgh 22, Pa.

For more details circle NED-874 J3 on enclosed inquiry slip

CONCRETE FINISH resin resists acid and alkali splash

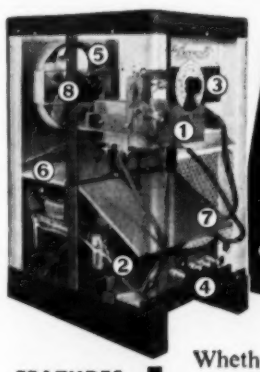
Corrosionproofing of concrete against most acid and alkaline splash and spillage is possible by application of a modified phenolic resin by brush or trowel. Called Phenoline 300, the material bonds completely to an alkaline or neutral surface and does not shrink in setting. It is hard and wear resistant and can be made smooth for easy cleaning or slip-proof for safety. Standard colors are gray, orange and brick red. Made by **Carboline Co.,** Dept. CF, 331 Thornton Ave., St. Louis 19, Mo.

For more details circle NED-875 J3 on enclosed inquiry slip

ICE REMOVING CHEMICAL for distribution by sprinkling

In the form of coarse granules, X-73 ice removing chemical is used by sprinkling lightly over icy surfaces. It is reported to melt ice and snow many times faster than salt, and to contain a rust inhibitor affording protection to automobiles, machinery, drains and gutters. It will provide quick traction to ice-bogged vehicles. Available in 100 and 200-lb fiber drums and in waterproof paper bags, product is manufactured by **Monroe Co.,** Dept. M-1, 10703 Quebec Ave., Cleveland 6, O.

For more details circle NED-876 J3 on enclosed inquiry slip



TODAY'S MOST ADVANCED D-C WELDER DESIGN
Makes D-C welding easier, more efficient than ever before . . . costs less to operate and maintain.

FEATURES
1. Efficient Rectifier.
2. Exclusive Transformer Design. No moving parts.
3. Calibrated current control.
4. Three current ranges.
5. Heavy Duty Cooling Fan.
6. Accessible primary.
7. Sturdy, safe cabinet.
8. Easy-grab lifting hooks.

Whether you operate one machine or many, the new Sureweld Rectifier Welder is your best D-C welder buy. It has no moving parts . . . nothing to wear out or cause noise. Operation is quiet, maintenance costs are almost negligible. Current adjustments are easy because you simply dial the current you want.

But most important, you get the one right welder for *your* job. That's because there are 5 different models to choose from, covering a current range of 2½ to 750 amps. Each model has safety flush-front construction, sturdy, drip-proof cabinet. See this new welder at your nearest NCG branch office or authorized dealer. Or write for Bulletin NH-114.

Copyright 1953, National Cylinder Gas Company

NCG NATIONAL CYLINDER GAS COMPANY
840 N. Michigan Ave., Chicago 11, Illinois

For more details circle NED-877 J3 on enclosed inquiry slip

If your record of safety is slipping...

. . . you can get back on a firm footing with WHIZ Check-Slip. Check-Slip is the self-polishing floor coating that contains no wax, yet gives all the lustre, long wear and low-cost maintenance features you want in a first-class floor finish. And the beauty of it is — no slipping. All kinds of companies know Check-Slip stands up on all kinds of floors—not tacky, dirt-catching or discoloring. Non-inflammable, too.

For details, write Hollingshead today!

INDUSTRIAL SECTION
R. M. Hollingshead CORPORATION
LEADER IN MAINTENANCE CHEMICALS
840 Cooper St., Camden 2, N. J.

For more details circle NED-878 J3 on enclosed inquiry slip

Wolverine Heavy Duty QUICK ACTION TOGGLE CLAMPS
Extra CLEARANCE
Extra SPEED

Rugged construction—drop forgings, cast steel and solid bar stock.

• • •

Wolverine Toggle Clamps also available in several types and sizes of Standard Action and Push Action units.

• • •

Wolverine Clamps are in use in almost every major industrial field and are specified by prominent engineering firms. Write for Bulletin.

WOLVERINE TOOL CO.
1482 E. WOODBRIDGE
DETROIT 7, MICHIGAN

For more details circle NED-879 J3 on enclosed inquiry slip

LIFTS DIRT FROM FLOORS... HOLDS IT OFF...
CINDET
100% ACTIVE 100% SAFE!

NEW LIQUID SYNTHETIC DETERGENT

Whether your water supply is HARD or SOFT, cleaning with CINDET means *no curds, no dingy film!* CINDET is *surface-active*—it works on the principle of LIFTING floor dirt, grease and old water-emulsion wax from floors and HOLDING it in suspension in a fluffy mass of energetically-cleaning SUDS. *Dirt is not re-deposited*—rinses off easily.

Dilute a little CINDET in HARD or SOFT water . . . apply with clean mop . . . let foamy, clean-looking suds stand 5 or 10 minutes . . . scrub only if necessary, and rinse thoroughly. The result: AMAZINGLY BRIGHT, CLEAN FLOORING.

Safe for *all* flooring—and wonderful for removing stubborn rubber marks. Also excellent for walls, for shampooing rugs and upholstery, for washing dishes by hand.

DOLGE backs up CINDET with a complete-satisfaction-or-deal-is-off GUARANTEE! Write for literature; have your DOLGE SERVICE MAN demonstrate CINDET on *your dirtiest, greasiest flooring.*

THE SUDS DO THE WORK!

FOR FREE SANITARY SURVEY OF YOUR PREMISES SEE YOUR DOLGE SERVICE MAN

dependable DOLGE
WESTPORT, CONNECTICUT

For more details circle NED-880 J3 on enclosed inquiry slip

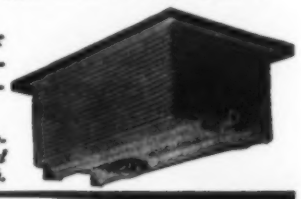
Here's help for you on...

COMPOUND MELTING

You specify the size, shape and heat you require in a compound melting tank. *You* name the accessories . . . valves, lids, legs, controls . . . you need. *You* determine the hourly or daily capacity your melting tank must produce . . . together with allowable tolerances . . . and all other essentials.

Then let Sta-Warm go to work for you. Shortly you will receive a specific proposal to match every item you specified, a plan that is highly efficient because it will be based on the time-tested "Sta-Warm Method" of designing and building compound melters for an almost infinite variety of applications over a period of 30 years.

Why not write today for a brief resume of the "Sta-Warm Method". No obligation. *Address . . .*

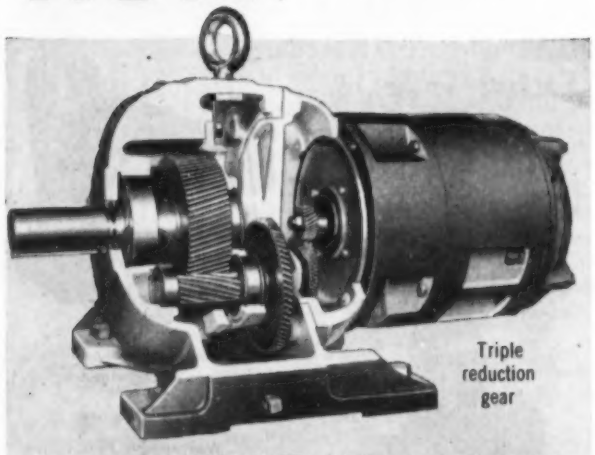


View showing how heating element covers entire sidewall and bottom of typical Sta-Warm tank.

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO

For more details circle NED-881 J3 on enclosed inquiry slip

NOW ...Simplify Your Motor Drives ...and SAVE!



Here's BUILT-IN SPEED ...to Fit Your Need

WITH A COMPLETE, NEW LINE OF

Century Gearmotors

equipped with

"Duti-Rated" PRECISION GEARING

Now you can profit by the advantages of more compact, safer and simpler motor power transmissions...with rugged Century **GEARMOTORS** to match the operating speed of your equipment.

This new Century line offers a wider-than-ever choice of:

BUILT-IN SPEEDS
MOTOR OPERATING CHARACTERISTICS
FRAME PROTECTION
HORSEPOWER RATINGS . . . 1 to 15 h.p. with Duti-Rated Precision Gearing . . . and fractional gearmotors from ⅛ to ¾ h.p. are also available. Larger ratings can be furnished if required.

Write For Complete Information
CENTURY ELECTRIC COMPANY
Saint Louis 3, Missouri

820A

Century C MOTORS

Offices and Stockpoints in Principal Cities

For more details circle NED-882 J3 on enclosed inquiry slip

New Literature & Catalogs

Tubular Conveyors

Hapman-Dutton Co., Hapman Conveyors Div.—Engineering and mechanical details of line of tubular conveyors for handling metal chips, sludges, wet or dry chemicals, powdered coal and other materials, are found in 4-page bulletin H-453H. Nine typical layouts are shown.

For more details circle NED-883 J3 on enclosed inquiry slip

Brass, Bronze & Aluminum Forgings

Mueller Brass Co.—How brass, bronze and aluminum alloy forgings are made, together with their characteristics and advantages is detailed in 32-page bulletin H-58565. Charts show chemical composition and physical properties and a section is devoted to design considerations for use of forgings. Machining data also are present.

For more details circle NED-884 J3 on enclosed inquiry slip

Ultrahigh Speed Relays

Stevens-Arnold, Inc.—Millisec ultrahigh speed factory sealed relays which cover a wide temperature range are described in illustrated catalog 337 of 8 pages. Variety of types is detailed. They can have gold or platinum-rhodium contacts.

For more details circle NED-885 J3 on enclosed inquiry slip

Oil & Gas Combustion Equipment

Hauck Mfg. Co.—Those concerned with selection, supervision, operation and maintenance of oil and gas combustion equipment as applied to industrial furnaces, ovens, kilns, driers, heaters, stills and similar equipment will be interested in third edition of "Hauck Industrial Combustion Data," a book of 168 pages. It is well illustrated and has much technical data.

For more details circle NED-886 J3 on enclosed inquiry slip

Caustic Soda

Comprehensive data on caustic soda, its production and uses, methods of manufacture, forms and grades, comparative economics of solid and liquid caustic and other information, are found in the 64 pages of the illustrated manual "Caustic Soda." Tables and charts contain much data and information on material's properties, methods of analysis and mixing of solutions. Manual available upon letterhead request to Columbia-Southern Chemical Corp., 420 Ft. Duquesne Blvd., Pittsburgh 22, Pa.

For more details circle NED-887 J3 on enclosed inquiry slip

Bronze Bearings & Bronze Bars

Bunting Brass & Bronze Co.—Listings of industrial standard stock bearings, bars and electric motor bearings are the content of pocket-size illustrated catalog 152 of 64 pages. Bearings are listed by name of motor manufacturer. Complete specifications are given.

For more details circle NED-888 J3 on enclosed inquiry slip

He works around fast-moving gears,
He cannot risk a slip . . .
So, for sure footing through the years
He walks on Multigrip.

U·S·S multigrip FLOOR PLATE

UNITED STATES STEEL CORPORATION, PITTSBURGH
COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA.
UNITED STATES STEEL SUPPLY DIVISION, CHICAGO
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

Sold by leading distributors from coast to coast 3-1812

UNITED STATES STEEL

For more details circle NED-889 J3 on enclosed inquiry slip

NOW... FAST, ACCURATE SET-UPS FOR ANGULAR GRINDING

Magna-Lock SINE

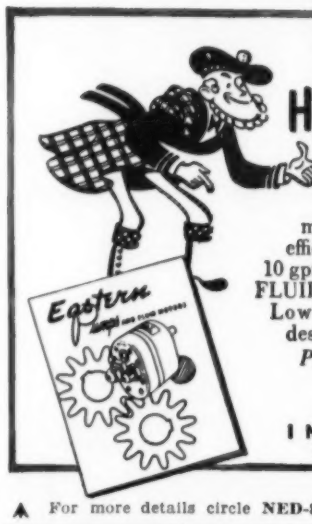
WHAT IT IS: An electro-magnetic chuck for making precision angular set-ups on surface grinders. Standard gauge blocks insure maximum accuracy. No dials, no scales. Rugged precision-made hinge is only moving part.

WHAT IT DOES: Single or compound angle set-ups made in minutes. Work held securely . . . powerful magnetic attraction minimizes distortion or warpage during machining operation.

Get full details now. Write Dept. ND-93.

MAGNA-LOCK, INCORPORATED
Magna-Lock
Magnetic Chucks and Devices
BIG RAPIDS, MICHIGAN, U. S. A.

For more details circle NED-890 J3 on enclosed inquiry slip



Hydraulic Pumps

HYDRAULIC PUMPS by Eastern do the work of giants. They are precision-made for highest volumetric efficiency. Volumes from .05 to 10 gpm against pressures to 200 psi. FLUID MOTORS develop to 6 H.P. Low starting torque, compact design. *Write for HYDRAULIC PUMP CATALOG 800-D*

Eastern
INDUSTRIES, INC.
296 Elm St., New Haven, Conn.

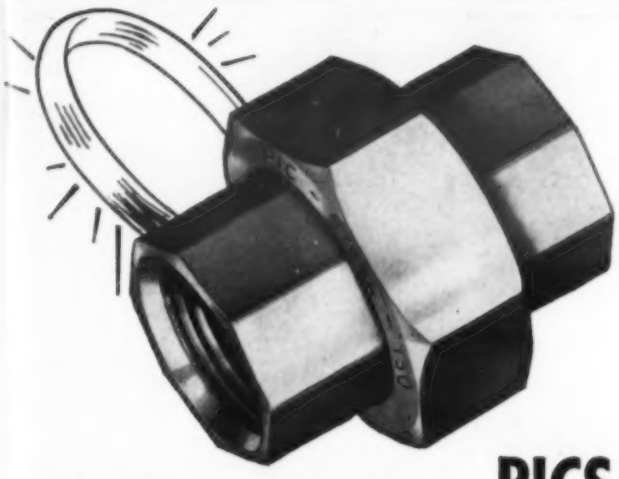
For more details circle NED-891 J3 on enclosed inquiry slip

BROWNHOIST BUILDS
BETTER BUCKETS
● BUY DIRECT FROM
FACTORY FOR LESS
● ROPE REEVE, POWER WHEEL
LINK TYPE
● WRITE FOR
CATALOG

INDUSTRIAL BROWNHOIST CORP.
BAY CITY, MICHIGAN

156

For more details circle NED-892 J3 on enclosed inquiry slip



WED YOUR NEW EQUIPMENT TO **PICS**

for a Happy Union!

PIC STEEL UNIONS blend perfectly with appliances because they're bright, gleaming, good looking. Functionally they're strong—ends are heavy steel pipe coupling stock, uniformly flat-sided for rapid installation with open end wrenches. Special wedge type bronze seat gives tight, safe closure. 100% zinc plated (including threads) to protect against rust. Pics are priced right — less than a galvanized, no more than a black malleable union!

For 150 lb. service — write for FREE Samples
DART UNION COMPANY
132 THURBERS AVENUE, PROVIDENCE 5, R. I.

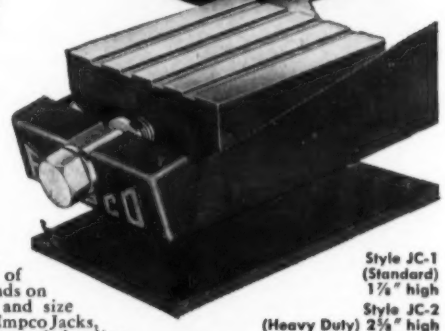
For more details circle NED-893 J3 on enclosed inquiry slip

QUICK, ACCURATE MACHINE LEVELING

WITH VIBRATION ABSORBING MOUNTING PADS

- *Provides Accurate Adjustment*
- *Reduces Vibration and Noise*
- *Lower and Sturdier*
- *Self-Aligning*
- *Two-Way Control*
- *Smooth Slipways*

Empco JACK



Empco Jacks enable you to meet hurry-up demands for relocation of machinery by giving you the fastest, easiest, most accurate machine leveling ever known: you simply raise or tilt machine sufficiently to allow the Empco Jacks to be slipped under base. The number of jacks required depends on weight of machine and size of base. Once set on Empco Jacks, the entire operation of leveling and maintaining equipment level is quickly done. By applying a wrench to the "hex" head of adjusting screw, an adjustment is obtained either up or down until your level indicator reads "zero." Write for specifications and prices today.

Style JC-1 (Standard) 1⅞" high
Style JC-2 (Heavy Duty) 2⅝" high

EMPCO PRODUCTS

THE ENTERPRISE MACHINE PARTS CORPORATION
2727 JEROME AVENUE • DETROIT 12, MICHIGAN

For more details circle NED-894 J3 on enclosed inquiry slip

the *New* SAF-I-FLEX
with Grid Vents and Replaceable Lens

FRAME—Crystal Clear VINYL frame permits wide-angle side vision. Velvet Soft—Fits contour of all faces snugly. Inside edge of frame rolled for more comfort and better fit. Generous grid vents for full ventilation.

LENS—Optilite ® Lens meets Federal Spec. for optical qualities and impact resistance—available in Crystal Clear or Green. Lens quickly and easily replaced—locks securely in frame. Extra large lens area—fits over most styles of personal glasses.

WRITE FOR LITERATURE AND PRICES

UNITED STATES SAFETY SERVICE CO.
KANSAS CITY 6, MISSOURI — BRANCHES IN PRINCIPAL INDUSTRIAL CITIES
In Canada: PARMELEE, LTD. Toronto—Montreal

For more details circle NED-895 J3 on enclosed inquiry slip

New Processes & Materials

METAL FASTENING METHOD
punch and die "button" metal to metal

Dissimilar or similar sheet metals up to ¼-in. thick can be fastened together on any punch press in one step by the "Williams Metalace" method. Special punch and die make a parallel double incision in the work. Metal incised is pushed downwards against die anvil beneath the sheets and between the die's yieldable jaws. There the impact force spreads the depressed metal laterally, forming a permanent fastening wedge or button underneath the lower sheet. The resulting joint will not pivot, and can be easily sawed or reworked. Tests show that process gives strength and holding qualities comparable with those of conventional riveted joints, and that it is applicable to any metal that can be sheared, drawn and upset. Equipment made under license by **Crockatt Engineering Co.**, Phelan Building, San Francisco, Calif.

For more details circle NED-896 J3 on enclosed inquiry slip

IMPREGNATED LEATHER
elastomer gives controlled porosity

Porosity of leather seals and packings, long a problem in the mechanical leather applications, is controlled in Conpor elastomer-impregnated leather. Retaining the good properties of leather, the oil seal and hydraulic packing material has flexibility, strength, stability, resistance to oils and solvents, flexibility at low temperatures and ages well. Leathers are available in a range of porosities from 0 to 100 per cent and in full thickness or limited-depth impregnations. Made by **Chicago Rawhide Mfg. Co.**, 900 N. State St., Elgin, Ill.

For more details circle NED-897 J3 on enclosed inquiry slip

MASTIC FLOORING
stable with high tensile strength

Vehicular loads can start and roll easily over Liggite, a mastic flooring binder which increases stability without loss of tensile strength. Material is resistant to all traffic loads. There are no humps at the edges of the installation, as the material "feathers" well. It is resistant to oil and grease, but will deteriorate under long exposure to large quantities of petroleum products. Twenty-four hour waiting period is required after installation before use. Made by **Flash-Stone Co.**, 3727 Pulaski Ave., Philadelphia 40, Pa.

For more details circle NED-898 J3 on enclosed inquiry slip

Colonial Develops SPECIAL RUBBERS

FOR *Tough* INDUSTRIAL APPLICATIONS

CONSULT OUR ENGINEERS ON YOUR RUBBER PARTS PROBLEMS AT NO OBLIGATION

The Colonial Rubber Company has the experience, the technical staff, and the facilities to meet your *special* requirements in industrial rubber parts. Our service is fast, efficient and precise for three important reasons:

Colonial Operates Its Own
- RUBBER RESEARCH LABORATORIES
- DIE-MAKING MACHINE SHOP
- PARTS PRODUCTION PLANT

Send for Free Illustrated Booklet
Contains complete details on Colonial's custom rubber compounding and molding . . . shows *why* manufacturers can use this service to advantage.

2300

Colonial Rubber Co.
Ravenna, Ohio

For more details circle NED-899 J3 on enclosed inquiry slip

a positive approach...

to lower handling costs saves this manufacturer $6.00 every time his five-ton Robbins & Myers "F" hoist handles a bundle of steel. Bigger unit loads, plus "Freeway"* overhead handling methods offer similar savings to all types of industry. For data on this specific hoist write for Bulletin No. 801-C.

**Materials handling on a separate overhead level.*

TAKE IT UP WITH
ROBBINS & MYERS INC
MOTORS HOISTS CRANES FANS MOYNO PUMPS
HOIST AND CRANE DIVISION, SPRINGFIELD 99, OHIO

For more details circle NED-900 J3 on enclosed inquiry slip

to speed multiple dock loadings

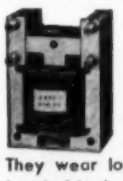
Here is a battery of 5 Dock Ramps over which Addressograph-Multigraph Co. Cleveland, moves scores of truck loadings in and out each day . . . "*materially reducing waiting time of highway carriers and increasing volume of merchandise handled per man hour.*"

Engineered and built by Beacon Machinery Inc., East St. Louis, Illinois, these 10-ton capacity ramps provide ± 12" vertical and 14" horizontal travel—are automatically leveled. Each ramp is operated by 2 hydraulic rams located in each pit, all remote push button controlled through

Namco "Stellite"-Welded Solenoids

Namco Solenoids were first built with stamina to satisfy our own hydraulic machine tool needs; they are now standard equipment in 85% of the machine tool industry —many of which are engineered to the job.

Either AC or DC type solenoids may be specified. Standard ratings range from 2½ to 25 lbs. at 1" stroke. Ask your engineers to talk with ours. Catalog EM-52.



COMPACT • DEPENDABLE • TROUBLE-FREE

These compact electrical Solenoids are more positive and less costly than cumbersome mechanical contrivances that require frequent inspection and replacements.

They wear longer because the patented "Stellite"-Weld is bonded in the end of the plunger at its vital point of impact against the frame. In addition, upper guide faces of the plunger are hard chrome plated—wear resisting.

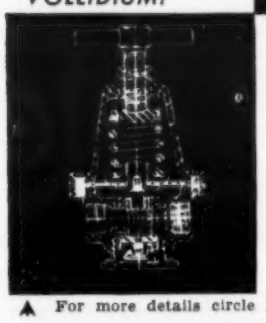
ELECTRICAL MANUFACTURING DIVISION
The NATIONAL ACME CO.
182 E. 131st Street, Cleveland 8, Ohio

Acme-Gridley Bar and Chucking Automatics, 1-4-6 and 8 Spindle —Hydraulic Thread Rolling Machines—Automatic Threading Dies and Taps—Limit, Motor Starter and Control Station Switches—Solenoids—Contract Manufacturing.

For more details circle NED-901 J3 on enclosed inquiry slip

acro
by AIR CONVERSION RESEARCH
a high quality low maintenance cost
PRESSURE REGULATOR

It's made of A.C.R.'s new miracle alloy VOLLIDIUM!



Available in both non-bleeding and self-bleeding models. acro regulators are sensitive and accurate while outperforming all other regulators. It is truly the highest capacity regulator on the market.

write or wire for full information.
AIR CONVERSION RESEARCH CORPORATION
4107 north damen ave.
chicago 18, illinois

For more details circle NED-902 J3 on enclosed inquiry slip

ANY-SPEED OILGEAR FLUID POWER TRANSMISSION Solves drive problems —Improves machine performance

Even machines that lead their fields have benefited greatly by a change to the *ANY-SPEED* Oilgear Fluid Power Transmission . . . simply because top machine performance often depends on a speed flexibility other drives just don't have. The *Any-Speed* Oilgear is *just that*—from zero to 1600 r.p.m. And once you pick your best speed it stays there . . . or until you want to change. Smooth shading of speed all the way up or down. Full control manually, hydro-electrically, pushbutton or automatic remote. Small, durable, dependable, this "power package" installs easily, ends drive trouble, saves power, cuts maintenance to a sliver. Simple, accessible design. Drives off any constant speed source. Write for descriptive Bulletin 67110A. THE OILGEAR COMPANY, 1582 West Pierce St., Milwaukee 4, Wis.

For more details circle NED-903 J3 on enclosed inquiry slip

ELASTIC STOP NUT CORPORATION OF AMERICA
Dept. R17-937, 2330 Vauxhall Road, Union, N. J.

Please send me free design information on

ROLLPIN TRADE MARK

. . . the slotted tubular steel pin with chamfered ends used for production economies in replacing

- ☐ a rivet
- ☐ a set screw
- ☐ a hinge pin
- ☐ a bolt and nut
- ☐ a stop pin
- ☐ a cotter pin
- ☐ a taper pin
- ☐ a dowel

NAME_____ TITLE_____
FIRM_____
STREET_____
CITY_____ ZONE_____ STATE_____

For more details circle NED-904 J3 on enclosed inquiry slip

New Literature & Catalogs

Your Lifting Problems Studied

Wayne Pump Co.—Liftronics is described as a scientific analysis of materials handling problems and the application of industrial lifts to solve these problems. In an illustrated brochure, this company describes its system of analyzing your plant and its handling problems, then recommending the correct lift or system of lifts. Photos show many applications of equipment.

For more details circle NED-905 J3 on enclosed inquiry slip

Screwdriving Tools

Sixty-page illustrated catalog No. 21 has specifications and prices for line of production screwdriving tools. Included are bit holders, insert bits, power bits, hand and offset drivers and finder sleeve assemblies designed to fit all principal makes of air, electric and spiral drivers. Request on company letterhead to Apex Machine & Tool Co., 1046 S. Patterson Blvd., Dayton 2, O.

For more details circle NED-906 J3 on enclosed inquiry slip

Testing & Measuring Devices

General Electric Co. — Revised 64-page catalog GEC-1016A contains information on over 115 testing and measuring devices for laboratory and production line use. Products included range from simple current indicators to automatic oscillographs, from surface roughness scales to mass spectrometers, and from direct current amplifiers to radiation monitors. Reference to more complete bulletins on each type of equipment is also included.

For more details circle NED-907 J3 on enclosed inquiry slip

Polymer-Epoxy Resin Combinations

Thiokol Chemical Corp.—Preliminary formulas and applications for polymer-epoxy resin combinations, a development for use in potting, adhesive and coating fields, are assembled in portfolio form. Application data, plus chemical and physical properties, are included.

For more details circle NED-908 J3 on enclosed inquiry slip

Packing Types

Raybestos-Manhattan, Inc., Packing Div. — The "Big 7" types which take care of 95 per cent of all packing applications are described, illustrated and their specifications given in 24-page bulletin 3903. Applications and advantages of each type are given.

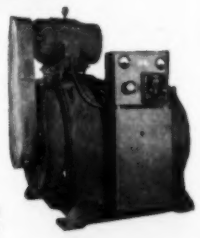
For more details circle NED-909 J3 on enclosed inquiry slip

Industrial Trailers & Trucks

Thomas Truck & Caster Co.—With a deck height of 8-in. the Lo-Deck trailer is among the line of industrial trailers and dump trucks featured in catalog CT-53. Also included are side dump trucks, industrial trailers and wagon trucks for light and heavy duty loads up to 20 tons capacity.

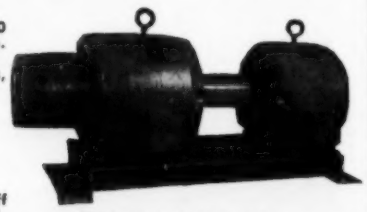
For more details circle NED-910 J3 on enclosed inquiry slip

...FOR A JOB WELL DONE!
KATO ENGINEERED ELECTRICAL EQUIPMENT



KATO ENGINEERING has been building Special Electrical Equipment and Machinery since 1928. Our modern, well equipped plant produces the finest in generators and electrical machinery from the smallest to the largest. *We invite your inquiries on special requirements!*

A. C. GENERATORS
Sizes from 100 watts to 300 K.W., in one or two bearings. Speeds of 720—3600 R.P.M., 60 cycles. Also 15—800 cycles, single and three phase.
D. C. GENERATORS
Sizes ranging to 15 K.W.
ROTARY CONVERTERS
For Changing D.C. to A.C.
HIGH FREQUENCY CHANGERS
D. C. MOTORS up to 10 H. P.
D. C. MOTORS With A. C. Take-Off
A. C. MOTORS, SINGLE PHASE 1, 1½, 3 H.P.



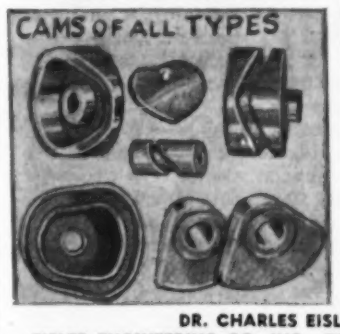
MOTOR-GENERATOR SETS
D. C. to A. C., A. C. to D. C. 25 cycles to 60 cycles, 60 to 400 cycles.

KATO *Engineering Company*
WRITE TODAY FOR INFORMATION!
1464 FIRST AVENUE MANKATO, MINNESOTA

For more details circle NED-911 J3 on enclosed inquiry slip

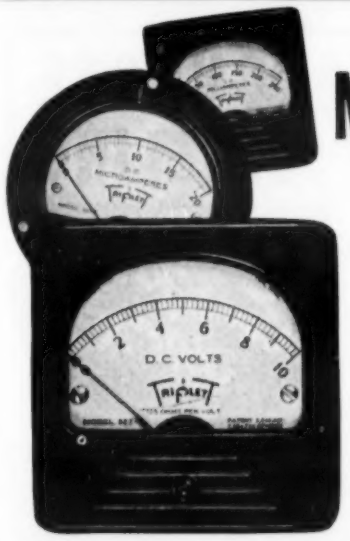
TURNTABLES AND POSITIONERS over 100 different types for welding, brazing, soldering, spraying, glass insulator melting and glass glazing, with rotating stations and indexing with barrel cam or geneva gear action. For work transferring, tilting positions, motorized or hand operated. Rotating tables of all kinds for over 33 years. Many types made by EISLER. We supply any part or complete equipment and we make special turntables to your order. Write for catalog.

CAMS
MADE TO YOUR SPECS.



DR. CHARLES EISLER, M. E., PRES.
EISLER ENGINEERING CO. INC., 740 S. 13TH ST., NEWARK 3, N. J.

For more details circle NED-912 J3 on enclosed inquiry slip



MODERNIZE WITH TRIPLETT METERS

A SIZE, TYPE, AND STYLE FOR EVERY INSTALLATION

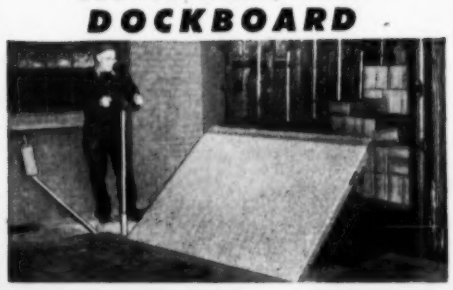
Your instrumentation is strictly modern in design and construction with Triplett Meters. You can have sizes 2" to 7" in a wide variety of case shapes and mounting arrangements, A.C., D.C., R.F., Rectifier or Dynamometer. Molded and metal cases, rear illumination, and other special features are available. For precision and economy virtually every meter part is made in Triplett plants under rigid humidity and dust control. Every meter represents the refinements gained in half a century of meter experience. Keep *your* panels up-to-the-minute with Triplett Meters—famous the world over for quality, accuracy, and dependability.

Triplett Electrical Instrument Co.
Bluffton, Ohio, U.S.A.

TRIPLETT ELECTRICAL INSTRUMENT CO. BLUFFTON, OHIO U.S.A.

For more details circle NED-913 J3 on enclosed inquiry slip

HERCO
4 WAY -- Up-Down-Right-Left
COUNTERWEIGHT ACTION
DOCKBOARD



Improved, positive geared counterweight action. (Assures board contact with truck at all times.)
Simplified geared side to side adjustment.
Installation made easy with new design.
Operates in all kinds of weather
Right or left hand control.
Automatic locking in raised position.

● NO MAINTENANCE OR UPKEEP ● BUILT TO MEET TODAY'S TOUGH DOCK PROBLEMS ● LOW IN COST ● ECONOMICAL INSTALLATION.

Karl A. HERMAN Company
412 FULLER AVE., N. E.
GRAND RAPIDS, MICH.

For more details circle NED-914 J3 on enclosed inquiry slip

it's the finish that counts!

ROTO FINISH

Roto-Finish CHIPS AND COMPOUNDS ARE FIRST

in economy — in quality — in performance

Roto-Finish chips and compounds are carefully manufactured to fit your specific needs by the company that originated the Roto-Finish processes. They're specially designed to give the best results— faster — economically

SAVE MANHOURS AND MONEY by eliminating hand finishing. GIVE ABSOLUTE UNIFORMITY . . . in any quantity. MAINTAIN PRECISION TOLERANCES. CUT FINISHING costs as much as 80%. LOWER INITIAL AND MAINTENANCE costs.

THE ROTO-FINISH PROCESS puts grinding, deburring, descaling, polishing, britehoning and coloring on a MASS PRODUCTION BASIS. Put the experience and facilities of Roto-Finish to work for you on YOUR SPECIAL FINISHING PROBLEMS.

DW-45-36-2

WRITE FOR the fact-packed Roto-Finish catalog today!

Roto-Finish COMPANY

associated with The Sturgis Products Co.

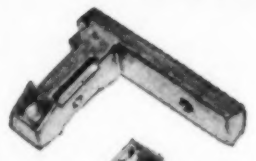
3702 Milham Rd., Kalamazoo, Mich., P. O. Box 988, Ph. 3-5578

ORIGINATORS OF THE ROTO-FINISH PROCESS

▲ For more details circle NED-915 J3 on enclosed inquiry slip ▲

SAVE on SMALL PARTS

DOLLIN Small Zinc DIE-CASTINGS



1000 per lb. to 3 per lb.

Produced *automatically* in *one operation* on special high-speed equipment. Cut piece-costs . . . make two or more parts as one . . . reduce machining operations. Send prints or samples for quotation. Small Parts Folder and Samples on request.

DOLLIN CORPORATION

612 So. 21st St., Irvington, N. J.

▲ For more details circle NED-916 J3 on enclosed inquiry slip ▲

INTERCHANGEABLE READY-POWER OFFERS 4 IMPORTANT ADVANTAGES

OVER OTHER GAS-ELECTRIC DRIVES

1 Only Ready-Power Units can be quickly changed. Installation takes just 5 minutes!

2 Only Ready-Power can be shifted from one truck to another.

3 Only with Ready-Power can trucks be kept working with quick change of power units.

4 Ready-Power's low engine speed means longer life, lower maintenance.

Remember . . . Your Truck Is No Better Than Its Power!

CONTINUOUS-DUTY POWER UNITS

The READY-POWER Co.

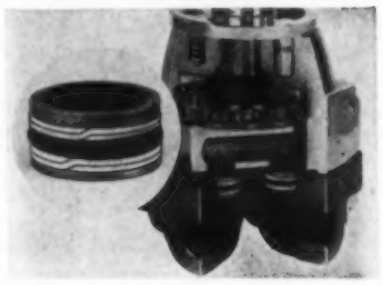
3832 Grand River Ave., Detroit 8, Michigan

Manufacturers of Gas and Diesel Engine-Driven Generators and Air Conditioning Units; Gas and Diesel-Electric Power Units for Industrial Trucks

▲ For more details circle NED-917 J3 on enclosed inquiry slip ▲

New Processes & Materials

SPIRAL BACK-UP RINGS protect rubber O-ring seals



Rubber O-ring seals can be indefinitely protected against extrusion, deterioration or loss of efficiency by the SR series of Kelon-T (Teflon) spiral back-up rings. Available with chamfered ends, chemically inert spiral packings will not swell, shrink, harden or soften and are unaffected by acids, oils, or bases or solvents. Usable temperature range is from −110 to 300° F. In some applications the back-up rings can seal without O-rings if the packing completely fills the groove in one continuous spiral of several layers. Available are 153 sizes from 0.125 to 15.50 in. ID. Made by **W. S. Shamban & Co.**, Dept. G, 11617 W. Jefferson Blvd., Culver City, Calif.

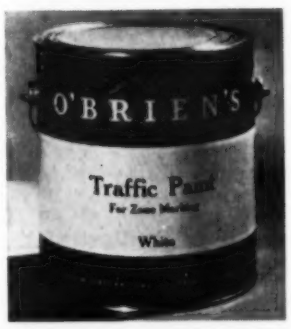
▲ For more details circle NED-918 J3 on enclosed inquiry slip ▲

CONTACT MATERIAL laminated to required dimensions

Raised-Lay, a precious metal contact material, is laminated in ingot form through heat and pressure and then cold-rolled to required dimensions. Base metal which is in strip form and contacts in the form of a ridge or bar can be laminated into any strip width or thickness. Contacts can be bonded in single, double or double-double combinations. Wearing surfaces are rolled to required tempers to give them a long service life. Made by **D. E. Makepeace Co.**, Pine & Dunham, Attleboro, Mass.

▲ For more details circle NED-919 J3 on enclosed inquiry slip ▲

RUBBERIZED TRAFFIC PAINT dries in 3 to 7 minutes



Little "hold-up" and confusion on driveway or plant parking lot marking jobs, plus definite time and labor savings are advantages of this rubberized traffic paint which dries in 3 to 5 minutes on concrete or asphalt and 5 to 7 minutes on brick. Paint can be applied at zero temperatures, covers and hides exceptionally well and has high reflective and long lasting qualities. Available in white or yellow from **O'Brien Corp.**, Dept. NED, 101 N. Johnson St., South Bend 21, Ind.

▲ For more details circle NED-920 J3 on enclosed inquiry slip ▲

Can *Bridgeport* *INNER-SEAL* solve your sealing problem?

Industry is constantly finding new applications for INNER-SEAL, the flexible, tough gasketing material. It's used for insulating, cushioning, gasketing in the automotive, railway and refrigeration fields. It's also used for countless other purposes in manufacturing—wherever sealing problems occur.

INNER-SEAL's patented construction—spring steel molded in live sponge rubber—makes an effective, pressure-tight seal. Neoprene coated INNER-SEAL is waterproof . . . resists sub-zero and tropic temperatures, sunlight, humidity, grease, oil and abrasion. INNER-SEAL fits perfectly into corners, around curves . . . lasts for years.

INNER-SEAL is stocked in standard dimensions and colors. Heavy-duty type available in black. Special types or colors made to order.

Perhaps INNER-SEAL can help you solve your sealing problem—and make *your* product better! Investigate INNER-SEAL!

Write today for FREE SAMPLES *and complete information.*

BRIDGEPORT FABRICS, INC., BRIDGEPORT 1, CONN.

▲ For more details circle NED-921 J3 on enclosed inquiry slip ▲

A Better Strainer! —by DAVIS

—with BOLTED CAP

Bolted cap construction is used in sizes from 1½" to 12".

If you think all strainers are alike, ASK THE MAN WHO HAS TO GET INTO THEM! Davis builds Strainers with bolted caps, (instead of threaded caps) because numerous engineers have asked for them. It's easier to remove bolts than to try to unscrew a large thread cap after a strainer has been in use. Also makes possible locating blow-off at lowest point; no sediment pocket. Don't confuse Davis precision-made strainers with ordinary pipe fittings. Available in wide choice of types for steam, air, gas, or fluids. Semi-steel, bronze, or steel bodies; screwed or flanged. Pressures to 1500 p.s.i. Brass, stainless or monel strainer screen. Ask for bulletin 100-A.

Davis

DAVIS REGULATOR COMPANY

2531 South Washtenaw • Chicago 8, Illinois

▲ For more details circle NED-922 J3 on enclosed inquiry slip ▲

PRODUCTION *UP* COSTS *DOWN* WITH *Commander* PRODUCTION TOOLS

Adjustable MULTI-DRILL

- Adjustable To Any Hole Pattern
- Drill 2 to 8 Holes at 1 Stroke
- Fits Any Drill Press

MODEL 900

Increase production up to 800%—save time, cut costs. Mounted without alterations or special tools. 9" drilling area; centers to ½". Extension Spindles available to increase area to 22½". Special adaptations available.

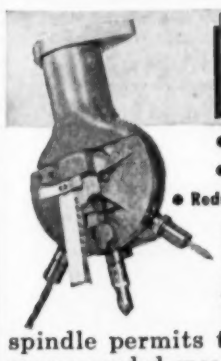
"the tapper that thinks for its operator"

Commander TAPPER

- Wider Range . . . 1 Tapper Handles #0 to ¾" Taps
- Automatic Tap Protection
- Furnished to Fit Any Drill Press

Adjustable full range torque control instantly stops any tap when it's dull, loaded, strikes a hard spot, or bottoms in blind hole tapping. Assures maximum production, cuts rejects, even with inexperienced operators.

SELECT A SPINDLE



- Drills, Reams, Taps on 1 Drill Press Spindle
- Increases Production
- Improves Accuracy
- Reduces Costs
- Can be Used on Any Drill Press

Save time, reduce handling with a Commander SELECT-A-SPINDLE Dual Speed Turret Head. Speed selection on each spindle permits tapping, drilling, reaming at recommended speed. Taps on 1, 2 or all 3 spindles Positive indexing of head without stopping motor. Ruggedly built for high production work.

Write FOR CATALOG #851 and the name of your nearby Commander Distributor.

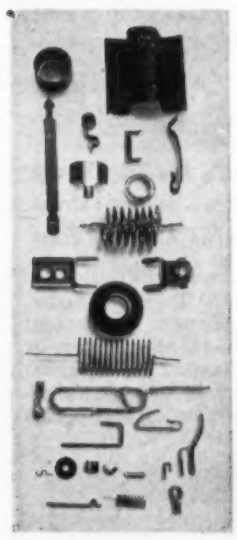
Commander MFG. CO.

4220 W. KINZIE STREET CHICAGO 24, ILLINOIS

▲ For more details circle NED-923 J3 on enclosed inquiry slip ▲

For more details circle NED-924 J3 on enclosed inquiry slip

Priced Right!
WIRE FORMS
& Metal Stampings

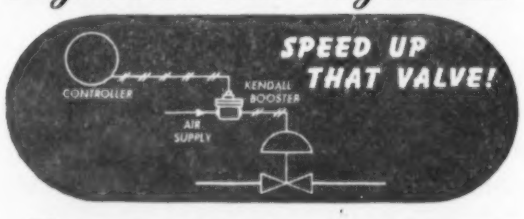


High-speed, quality production with custom-made precision. Wire formed to any shape for every need.
IMMEDIATE CAPACITY FOR DEFENSE SUB-CONTRACTS
STRAIGHTENING & CUTTING
Perfect straight lengths to 12 ft.
.0015 to .125 diameter
WIRE FORMS
.0015 to diameter
SMALL METAL STAMPINGS
.0025 to .035 thickness
.062 to 3 inches wide
Specializing in Production of Parts for Electronic, Cathode Ray Tubes and Transistors
Write for illustrated folder. Send Blueprints or Samples for Estimate.

ART WIRE and STAMPING COMPANY
15 BOYDEN PLACE
NEWARK 2, N. J.

For more details circle NED-925 J3 on enclosed inquiry slip

Engineered Air Regulation



We say—It's easy and inexpensive to minimize valve response lag in even the biggest diaphragm motor or cylinder type actuator when a KENDALL Booster triggers the action.

Prove our statement by testing this air volume amplifier on your most sluggish valve.

Write for Bulletin 4522 describing the Kendall Model 20 Precision Air Volume Booster with its

- High capacity—both supply and relief
- Perfect balance against supply pressure changes
- Precise ratios

Ratio No.	Loading Pressure	Output Pressure
1	Each 1 PSI	produces 1 PSI
1/2	" 1 "	" 1/2 "
1/3	" 1 "	" 1/3 "
2	" 1 "	" 2 "
3	" 1 "	" 3 "

KENDALL CONTROLS CORPORATION
144 MOODY STREET WALTHAM 54, MASS.

For more details circle NED-926 J3 on enclosed inquiry slip

New Literature & Catalogs

Industrial & General Purpose Pumps

Tuthill Pump Co.—Illustrated catalogs Nos. 101 and 102 cover small industrial and general purpose pumps, respectively. Small industrial units are designed for lubricating, hydraulic, transfer, circulating and burning oils service, and have capacities ranging from ⅓ to 3 gpm. General purpose types are for similar service with noncorrosive liquids with lubricating qualities and have capacities ranging from 0.87 to 212 gpm at different input speeds and motor capacities.

For more details circle NED-927 J3 on enclosed inquiry slip

V-Belt Drives & Sheaves

Pyott Foundry & Machine Co.—Constituting a comprehensive engineering and purchasing reference on the company line of power transmission equipment, 56-page illustrated catalog contains a mine of data on such equipment as v-belts, pulleys, bushings and sheaves. Complete selection tables are given for drives for any application between 1 and 1000 hp, together with dimensional illustrations and calculation tables for standard variables.

For more details circle NED-928 J3 on enclosed inquiry slip

Electric Trucks & Attachments

Raymond Corp.—Illustrated bulletins 703 and 732-Y show line of standard electric pallet and platform trucks and a revolving head attachment respectively. Trucks are of several types in both telescoping and nontelescoping models, with capacities ranging up to 4000 lb. Revolving attachment gives 360 degree rotation to both right and left and is useful for dumping tote boxes or skid bins in close quarters or working in 6-ft aisles.

For more details circle NED-929 J3 on enclosed inquiry slip

Lighting Efficiency

General Electric Co., Lamp Div.—"Group Lamp Replacement Pays Off" is title of a 10-page illustrated bulletin which gives case histories of advantages gained by group replacement of lamps in factories, offices and stores before units actually burn out. Replacement by this system is made either when lamps have burned a fixed percentage of their average rated life or when illumination has dropped below an established minimum level.

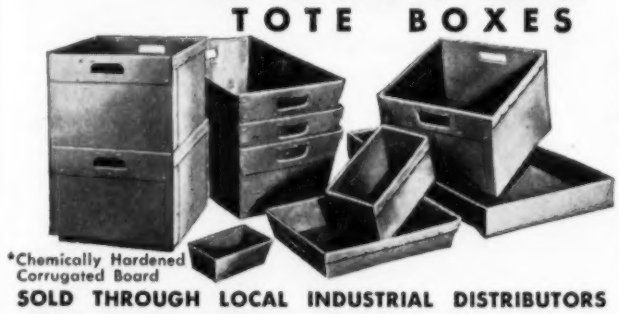
For more details circle NED-930 J3 on enclosed inquiry slip

Packaged Boiler Units

Combustion Engineering Inc.—16-page illustrated catalog describes principal features of type VP packaged boiler units, which provide steam capacities from 4000 to 30,000 lb per hour. Units are completely shop assembled. An automatic control system, tabular space requirements and typical specifications are all given.

For more details circle NED-931 J3 on enclosed inquiry slip

FAMOUS "CHEM-BOARD"* CONVOY TOTE BOXES



*Chemically Hardened Corrugated Board

SOLD THROUGH LOCAL INDUSTRIAL DISTRIBUTORS

Cost—weigh—50% to 60% less than steel. A wide range of sizes in standard and custom made NESTING, STACKING, VERTICAL TOTE BOXES. Write for complete information, prices, name of distributor in your area.

CONVOY RECORD STORAGE FILES
Sold Only by YOUR LOCAL STATIONER
Used by most famous names in industry and businesses of all kinds. CONVOY "CHEM-BOARD" files for record storage made in letter, legal, and 12 other sizes. Stack to ceiling, mate together. Call your local stationer or write for name of stationer nearest to serve you.

CONVOY, INC.
Canton 6, Ohio
P. O. Station B, Box 216-N

For more details circle NED-932 J3 on enclosed inquiry slip

H$_2$O anyone?

● If you need or use between 200 and 100,000 gallons per minute of clean water, find out how Cuno's FLO-KLEAN filters can save you money. In hundreds of applications throughout industry, the fully automatic, continuously self-cleaning FLO-KLEANS have paid for themselves many times over by making raw river, lake, or well water fit for industrial use—and reclaiming process water. Write for the free FLO-KLEAN bulletin. The Cuno Engineering Corporation, Dept. 702F Meriden, Connecticut.

82

For more details circle NED-933 J3 on enclosed inquiry slip

Bendix automotive Electric Fuel Pump

Unmatched for
LONG LIFE and RELIABILITY

Dependable as no Fuel Pump has ever been under all operating conditions

Performance Proven. Years of research, development, and rigorous tests have been made on this pump.

Longer Life—No Pressure Drop. No bearings or levers to wear; no diaphragm to fatigue.

Delivers More Gallons Per Hour. Can deliver more than 30 gallons output per hour. Two or more pumps can be manifolded.

Economical Operation. Low original cost and *long dependable life* make this fuel pump the best buy on the market.

Improves Low Temperature Starting. Tests prove that engines start at 10 to 15 degrees lower with the Bendix Fuel Pump.

Eliminates Vapor Lock. Assures a constant, dependable supply of fuel in the hottest weather.

Low Power Requirements. Only 7 watts at maximum fuel delivery.

Dependable Operation at 75° Below Zero. That's why the U. S. Army Ordnance Corps chose it to pump fuel to heaters in the extreme cold of the Arctic.

Easy to Install—Easy to Service—Tamper-Proof. Simple two-bolt mounting. No adjustments. Electrical system, sealed *in helium*, insures longest possible life.

Light Weight—Compact. A giant in output but a midget in weight—one pound, thirteen ounces.

WRITE TO DEPT. J

Eclipse Machine Division
Elmira, New York · Division of Bendix Aviation Corporation

For more details circle NED-934 J3 on enclosed inquiry slip

THROUGH **MILLIONS** OF CYCLES WITH STAR-KIMBLE BRAKEMOTORS

Stopping of a Star-Kimble Brakemotor is split-second in action, precisely timed by simple adjustments. Quiet, too — no lining screech. **Starting** is smooth and free from drag — small air gap assures quick brake release. Brake and motor are *designed* together to work together as a single compact unit. Write for Bulletin B-501-A.

Standard and special motors of all types, 1 to 600 hp; Marine motors ½ to 600 hp; generators and motor-generator sets, 1 to 500 kw.

STAR-KIMBLE
MOTOR DIVISION OF
Miehle Printing Press and Mfg. Co.
214 Bloomfield Avenue Bloomfield, N. J.

For more details circle NED-935 J3 on enclosed inquiry slip

SPRING-CORK STICKS!

Spring-Cork is the superior pressure-sensitive tape that *really* sticks. It's made of synthetic rubber, ground cork, and a powerful Holland-backed adhesive. There's nothing better for sealing out dust and fumes, absorbing shock, non-skid surfacing, etc. Assembly work goes quicker and easier when you use tough and versatile Spring-Cork.

Four thicknesses: 1/32", 1/16", 3/32", 1/8". Widths: 3/16" to 36". Available as a continuous tape, or as short lengths on continuous Holland-cloth backing. Makes excellent gaskets. Write for samples, full facts.

SPRING PACKING CORPORATION
332 South Michigan Ave., Chicago 4, Ill.

For more details circle NED-936 J3 on enclosed inquiry slip

DUO-SAFETY *all aluminum* STEP LADDERS

LIGHT WEIGHT FOR EASE OF HANDLING—BUILT TO LAST A LIFETIME!

Here's the perfect ladder for all types of industrial uses . . . manufactured of aluminum for strength, lightness, and resistance to moisture . . . steps and braces strongly reinforced . . . equipped with rubber safety shoes. Many other models available in the complete Duo-Safety Line.

—Write for Free Descriptive File Catalog—

DUO-SAFETY LADDER CORP.
809 — 9th St., OSHKOSH, WIS.

For more details circle NED-937 J3 on enclosed inquiry slip

New Processes & Materials

PROTECTIVE COATING
strippable type for parts and tools

Thermo-Cote D is a protective strippable coating for prevention of corrosion or abrasion damage to metal tools and parts during storage, handling or shipping. The ethylcellulose base coating is applied by the hot dip process. Parts can be handled in 1 to 2 minutes after dipping in a thermostatically controlled tank. Film is relatively thin, stable and transparent. After removal by slitting and peeling, coating can be reused. Made by **Ernst Bischoff Co.**, Plastics Div., 152 Main St., Ivoryton, Conn.

For more details circle NED-938 J3 on enclosed inquiry slip

GLAND PACKINGS
flexible, fabricated from Teflon

Completely inert to hydraulic fluids, oils, petroleum products, acids, bases and solvents, series S-2500 Vee-Seal flexible Teflon packings are suitable for service in valve stems and hydraulic cylinders, jacks, lifts and pumps. Due to V-type construction, packings are self-sealing and self-adjusting at finger tip gland pressures. Upon application of hydraulic pressure, seal expands against stuffing box and against stem. Useful temperature range of the seals is from −110° to 500° F. Units are available in sets to meet specific requirements and stack heights. Made by **W. S. Shamban & Co.**, Dept. G, 11617 W. Jefferson Blvd., Culver City, Calif.

For more details circle NED-939 J3 on enclosed inquiry slip

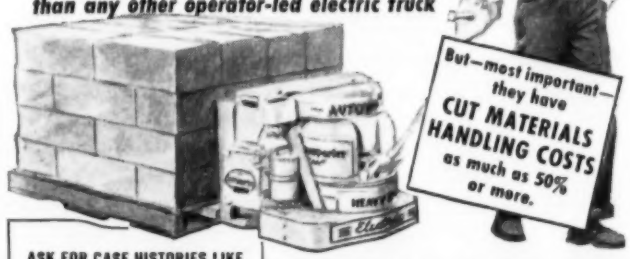
DO YOU KNOW? Eight years of intensive research have resulted in the development of Dow Corning 1360 silicone magnet wire enamel having physical properties comparable to those of the better organic enamels. Though not yet available commercially, this enamel has been used on wire of several test motors and is in excellent condition after more than 1500 hours' operation at 225°C. For information on properties and application data write to Dow Corning Corp., Dept. IS, Midland, Mich.

For more details circle NED-940 J3 on enclosed inquiry slip

THERE ARE 101 REASONS WHY . . .

INDUSTRY USES MORE TRANSPORTERS

than any other operator-led electric truck



ASK FOR CASE HISTORIES LIKE THESE FROM YOUR INDUSTRY

Midwestern steel plant cuts steel lath handling time 85% (despite 46% increase in volume handled) with Automatic Transporters and transtackers.

Southern Machinery Mfr., Prattville, Ala., shows total increase of 600% in tons handled per man-hour with fleet of 8 Automatic Transporters. One man, instead of 1500 lb. loads, handles 4000 lb. loads 50% faster with 50% saving in round trip time in loading and unloading push trucks.

Here's the truck that does so many jobs so well all industry uses it. Yes, for 101 good reasons, but mainly because—by eliminating slow, costly hand-handling—it saves industry millions of dollars. See for yourself how the "101" Transporter raises, moves up to 6000 pounds with touch-of-finger ease...lets 1 man do work of 3...releases 2 out of 3 for more productive work. Get all the facts.

For case histories in your industry write:

Automatic®
61 West 87th St., Dept. P-3, Chicago 20, Ill.
World's Largest Exclusive Builder of Electric Driven Industrial Trucks

For more details circle NED-941 J3 on enclosed inquiry slip

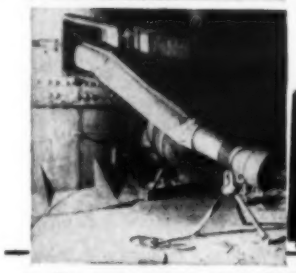
Drive out
FOUL AIR
Blow in
FRESH AIR
with Coppus Type A Ventilator

Assure greater safety, comfort for workers . . . get greater efficiency.

Drive out dangerous fumes, gases, stagnant or hot air from boilers, cable manholes, tanks, vats and other confined places. *Supply fresh air continuously.*

Send now for further information. Coppus Engineering Corporation, 409 Park Avenue, Worcester 2, Mass.

MANHOLES made safe for workers' entrance within minutes.

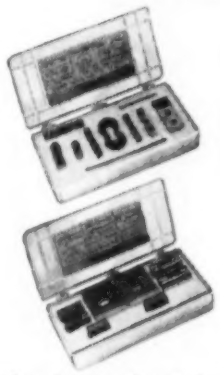


BOILER AND TANK INTERIORS cooled by Coppus. Fresh air supplied continuously.

ANOTHER **COPPUS** "BLUE RIBBON" PRODUCT

For more details circle NED-942 J3 on enclosed inquiry slip

Plant efficiency, safety improved with CARBOLOY® permanent magnets



Shop Packages 1 and 2 described below.

USERS REPORT ON "YOU-TRY-IT" KITS

Shop Supt. says magnets " . . . *prove very successful for holding parts during stroke of press*" in piercing die operation.

Welding Plant owner finds magnets " . . . *handy to position wire frame assembly while spotting.*"

Plant Engineer, typical of the hundreds of shop men trying magnet Shop Packages in their own plants, says, "*We have just begun to realize the possibilities of this product.*"

THESE are but 3 of hundreds of comments from shop men who have obtained "You-Try-It" Shop Packages of Carboloy permanent magnets.

They find the powerful, lasting energy of the magnets ideal for holding, lifting and separating jobs . . . for speeding setups, production . . . for saving time, money plantwide.

Order Carboloy magnet "You-Try-It" Shop Packages yourself. Perhaps they will spark you, too, to savings in your plant. See coupon.

Hold small parts for light grinding.

Identify grade of stainless steel.

Hold shield during paint spraying.

Get the "YOU-TRY-IT" Magnet Assortment

Shop Package No. 1 — Contains 48 Carboloy permanent magnets: 8 styles — 3 pairs each. Magnetic pull up to 2 lbs. per magnet. Price $10.00 (subject to applicable sales and use taxes). Order today.

Shop Package No. 2 — Contains 18 magnets: 4 styles — 2 pairs each; and 1 style — 1 pair. Magnetic pull from 3 lbs. to 12 lbs. per magnet. Price $15.00 (subject to applicable sales and use taxes). Order today.

"Carboloy" is the trademark for the products of the Carboloy Department of General Electric Company

MAIL THIS COUPON TODAY

CARBOLOY
DEPARTMENT OF GENERAL ELECTRIC COMPANY
11128 E. 8 Mile Blvd., Detroit 32, Michigan

☐ Send me free Magnet Idea Literature Kit.
☐ Send me____ Shop Package No. 1 at $10.00 each, postpaid.
☐ Send me____ Shop Package No. 2 at $15.00 each, postpaid.
☐ Enclosed is check or money order for $____. ☐ Send C.O.D.

Name_____ Position_____
Company_____
Address_____
City_____ Zone_____ State_____

For more details circle NED-943 J3 on enclosed inquiry slip

Give Your Product the Advantages of...

PLASTIC NAMEPLATES by SILLCOCKS-MILLER

Here's what these quality nameplates can give you:

- Distinctive appearance.
- Unlimited choice of colors.
- Resistance to temperature and weather.
- Lasting protection to message.
- Materials to fit your specific service.
- Freedom from corrosion.
- Easily kept clean.

Sillcocks-Miller specialists can help you work out your requirements to make the most of these advantages. Write for details and send specifications for quotation.

The SILLCOCKS-MILLER Company — Pioneers in Plastic Fabrication since 1910

30 West Parker Avenue • Maplewood, N. J.

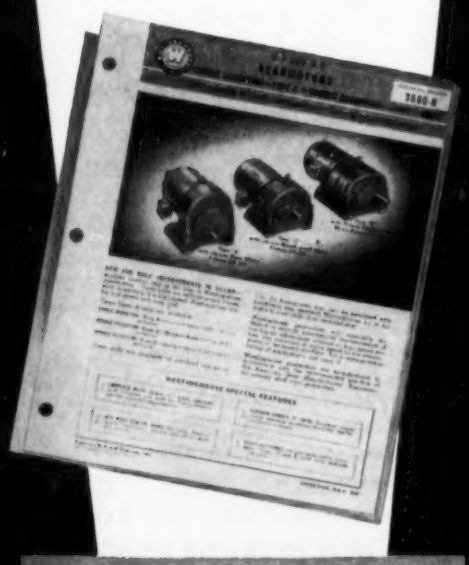
For more details circle NED-944 J3 on enclosed inquiry slip

Get your free copy of this Gearmotor booklet

Here are eight pages packed full of factual information on Life-Line Gearmotors. Application data, gearing specifications, motor specifications, methods of mounting, control selection and special features are included in this ready reference manual.

A free copy is waiting for you. Just send a note asking for a copy of DB-3600 to Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Pennsylvania. Or, call your Westinghouse representative and ask him for your copy.

J-07317



YOU CAN BE SURE... IF IT'S Westinghouse

Life-Line GEARMOTORS

For more details circle NED-945 J3 on enclosed inquiry slip

New Literature & Catalogs

Flowmeters

Fischer & Porter Co.—Designed for corrosive service, porcelain, glass and metal Flowrator fluid flow rate meters are illustrated and described in 16-page catalog No. 32. Hard lead, rubber-lined, glass and armored porcelain units with pressure seal enclosure are available in a wide range of sizes and capacities. Full specifications are provided.

For more details circle NED-946 J3 on enclosed inquiry slip

Standard Tool Castings

Myerstown Foundry & Machine Works—Including surface plates, planer and boring mill parallels, straight edges, toolmaker's knees and v-blocks, standard inspection tool castings in a wide size range are described in 20-page illustrated circular. All castings are of semisteel, and are normalized to prevent distortion after machining. Circular contains all range and size data.

For more details circle NED-947 J3 on enclosed inquiry slip

Skids & Lift Units

Thomas Truck & Caster Co.—Catalog JT-53 features line of Jak-Tung semi-live skids and lift units. These units can be used in conjunction with power equipment or by hand operation with the company's lift unit.

For more details circle NED-948 J3 on enclosed inquiry slip

Industrial, Office & Institutional Trucks

Nutting Truck & Caster Co.—43 different types of materials handling hand trucks are described and illustrated in 12-page bulletin 53-SC. Units are made in a variety of sizes, and include general purpose, mopping, and heavy duty types.

For more details circle NED-949 J3 on enclosed inquiry slip

Optical Instruments & Accessories

Edmund Scientific Corp.—A line of optical instruments and accessories of various types is described in this large catalog. This equipment represents both domestic, Japanese and war surplus goods, and includes lenses and prisms of various types, also telescopes, microscopes and such inspection equipment as an industrial pocket comparator.

For more details circle NED-950 J3 on enclosed inquiry slip

Electronic Weighing

Baldwin-Lima-Hamilton Corp.—How to weigh the contents of bins, tanks and hoppers electronically with SR-4 load cells is explained in illustrated bulletin 4106. Installations can be made accurate to 0.1 per cent of readings. Bulletin covers such design considerations as mounting, temperature and vibration effects and recording instruments together with ordering information.

For more details circle NED-951 J3 on enclosed inquiry slip

Electroforming

Bone Engineering Corp.—Electroforming is the reproduction of a formed article by electrical deposition of metal onto the surface of a removable mandrel or pattern representing the desired part. This process is described in 8-page illustrated bulletin as a possible method of solving complex forming problems, and its features are thoroughly discussed. Company production facilities are also described.

For more details circle NED-952 J3 on enclosed inquiry slip

Cost-Cutting Materials Handling

Yale & Towne Mfg. Co., Yale Materials Handling Div.—"The HOW Book of Cost-Cutting Materials Handling" incorporating latest methods for analyzing materials handling operations is offered in 28-page revised form. Contents and organization of book are based on the Vis-o-graf and Vis-o-graf summary analysis forms. Four pages illustrate various skids and pallets available and show their most efficient use.

For more details circle NED-953 J3 on enclosed inquiry slip

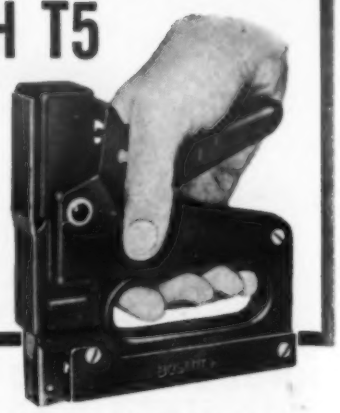
Electric Heating Units

Watlow Electric Mfg. Co.—Tab-indexed for quick reference, 1953 edition of the Electric Heating Unit catalog contains descriptive matter, specifications and illustrations on complete line of strip, cylindrical, ring, cartridge, tubular and immersion heaters. Packaged sealing devices, hot plates, thermostats, rheostats, switches, contactors, condensers, insulators and leads are covered as well. Special section is devoted to useful engineering data.

For more details circle NED-954 J3 on enclosed inquiry slip

BOSTITCH T5 TACKER

One in the hand is worth two men with hammers and tacks!



- Just about twice as fast—that's how manufacturers and contractors compare the Bostitch T5 Tacker to hammer and tacks.
- There are other big advantages. The T5 Tacker permits accurate locating of staples, even in tight spots. Drives staples to within 1/16" of corners, penetrates deep into hard or gummy woods. One-hand operation leaves other hand free for holding or aligning material. Equally important, workers like it.

BOSTITCH fastens it better AND FASTER with wire

For more information about the Bostitch T5 Tacker and for application details, write BOSTITCH, 689 Mechanic St., Westerly, R. I.

For more details circle NED-955 J3 on enclosed inquiry slip

7 CHECKS FOR A GOOD GEARMOTOR

1 Split Housing . . . Assures easy access to working parts without disturbing alignment or draining oil.

2 Integral Bearing Supports . . . Antifriction bearings mounted direct in rigid housing, not in end brackets, mean permanent alignment of gear shafts—maximum overhung load capacity.

3 Precision Helical Gears . . . Hobbed and shaved after heat-treatment mean quieter, smoother operation—maximum load-carrying capacity.

4 Taper-Hardened Gears . . . Tapered hardness from surface to core assures extremely tough, wear-resisting teeth—means longer life.

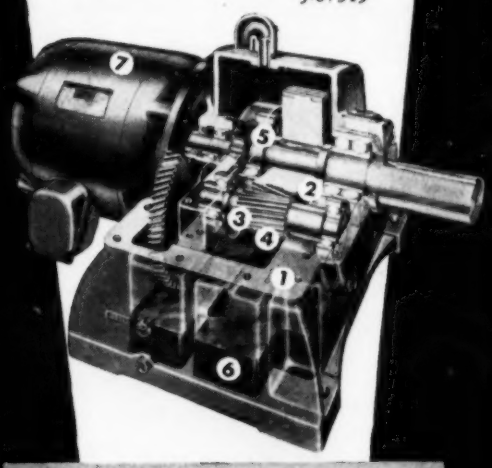
5 Integral Motor Design . . . Drive pinion mounted on motor shaft—no coupling to align and service—means fewer wearing parts, minimum maintenance.

6 Engineered Lubrication . . . Circulating splash system, protected-type breather, positive mechanical oil seals—mean thorough, leakproof lubrication.

7 Life-Line Motor . . . Pace-setting, industry-proved, compact steel motor with sealed-for-life bearings—means maximum motor dependability.

To get all these features, plus undivided responsibility for motors and gears, specify Westinghouse Life-Line Gearmotors. For more information, call in your Westinghouse representative. Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Penna.

J-07319



YOU CAN BE SURE... IF IT'S Westinghouse

Life-Line GEARMOTORS

For more details circle NED-956 J3 on enclosed inquiry slip

NEW LOW COST *Mobile* WORK BENCH

BASIC UNIT only $12.15 with steel tray top
wood top, steel drop sides $7.50 additional

IDEAL FOR . . .
Machine Service
Assembly Lines
Inspection
Maintenance
Laboratories
Shipping Dept.
Mailing Dept.

Here's the perfect all 'round auxiliary bench. Mobile, convenient, sturdy, low cost—saves hundreds of steps; speeds up work and production. Adjusts to 9 different heights. Has handy tool tray. Lower tray and top frame are "tension bolted" for permanent rigidity. Available with tough, long-wearing wood top (24" x 24" x 1⅝") with drop sides and back—or steel trays; steel drawer with safety stop, 3" diameter hard rubber wheel sets or caster sets. For full details, specifications, prices, write for special Bulletin No. 344.

STURDI-BILT STEEL PRODUCTS, INC.
624 S. Michigan Ave., Chicago 5, Illinois

For more details circle NED-957 J3 on enclosed inquiry slip

Design your own Precision Gaging Fixtures . . .

. . around this Gage Head Cartridge

Measures by .0001" —.00001"

Compact, shock-proof, and moisture-proof, this inexpensive Brown & Sharpe Gage Head Cartridge No. 953 gives you a simple means for designing high precision into your own gaging fixtures. Plugs into No. 950 Electronic Amplifier which gives readings in .0001" to .00001" . . . only one master required for setting.

Cartridge has frictionless action, adjustable measuring pressure, and is ideal for inspection devices, jigs fixtures, and machines. Write for Bulletin. Brown & Sharpe Mfg. Co., Providence 1, R. I., U.S.A.

BUY THROUGH YOUR LOCAL DISTRIBUTOR

Brown & Sharpe

For more details circle NED-958 J3 on enclosed inquiry slip

Rubber Expansion Joints . . .

Rubber Expansion Joints shown are just a few of the many furnished to a public utility, but adaptable to any pipeline installation for transporting liquids or gases where the temperature does not exceed the range of -10°F. to 200°F. For other temperature conditions, consult our engineers.

With a backlog of more than half a century of experience, La Favorite "know-how" is daily solving many complex problems which involve protection from corrosion and abrasion. Consult La Favorite Engineers, without obligation on your part.

Send blue prints for estimate on costs.

2340

LA FAVORITE RUBBER MFG. CO.
273 Wagaraw Road • Hawthorne, N. J.
RUBBER LININGS • RUBBER COVERING • RUBBER ENGINEERING

For more details circle NED-959 J3 on enclosed inquiry slip

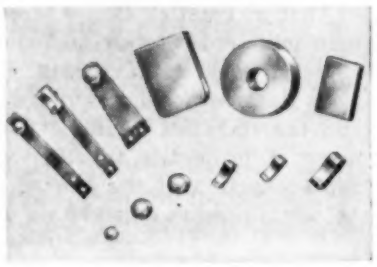
New Processes & Materials

SILVER PLATING SOLUTION applied by cloth, brush, immersion

It is now possible to silver plate connections, terminals, joints, and equipment without electricity or electroplating equipment using Nu-Silver No. 66 silver plating solution. Liquid is easily applied in few seconds with soft cloth or brush or by immersion, even in underground location or on poles. It can be used on silver, copper, brass, bronze, German silver and many other metals and alloys. Among advantages are increased electrical conductivity, cooler connections, less resistance, and minimizing of corrosion. Developed by **Specialty Manufacturers and Distributors**, 508-NED New York St., Aurora, Ill.

For more details circle NED-960 J3 on enclosed inquiry slip

SLIDING CONTACTS & BRUSHES grades from 5 to 80% graphite



Low contact resistance and high resistance to welding are features of silver graphite sliding contacts and brushes for such equipment as servo mechanisms, radar antenna operating units, calculating machines and midget motors. Extremely low noise levels are obtained by using units against silver ring. For ordinary uses, copper ring or commutator is sufficient. Available in diameters from 1/16-in. upward, units can be supplied with pure silver backing for easy spot welding or brazing directly to supporting arms or springs, as well as with copper backing, integral rivet or other mounting device. Standard grades range from 5 to 80 per cent graphite. Made by **Stackpole Carbon Co.**, Dept. NED, St. Marys, Pa.

For more details circle NED-961 J3 on enclosed inquiry slip

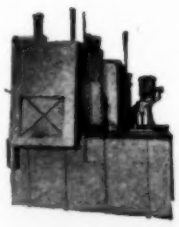
GLOVE COATING COMPOUND gives grease and oil resistance

A Neoprene rubber product, Glove-Kote coating for cotton work gloves gives improved hand protection together with improved wearing qualities and water, oil and grease resistance. The compound can be applied either by painting on or by rubbing in, and a pint coats 10 pairs of gloves. Two coats can be applied to give maximum protection, in which case 36 hours total drying time is necessary before use. The compound can also be applied to other textile products such as work aprons, tarpaulins and canvas shoes. Made by **Industrial Adhesives, Inc.**, Dept. 2, 4208 Airport Road, Cincinnati 26, O.

For more details circle NED-962 J3 on enclosed inquiry slip

standard rated furnaces give buyer preview of costs, applications

Eliminate heat treating guess-work with a 'Surface' Standard Rated Furnace. You get pre-determined performance; known costs for every operation; standard designs with cost distributed over many units; adaptability (different sizes, different types of heating); versatility (variety of processes on both ferrous and non-ferrous metals). Write for Literature Group H53-13.



Surface HEAT TREATING EQUIPMENT

SURFACE COMBUSTION CORPORATION, TOLEDO 1, OHIO
Also makers of
JANITROL AUTOMATIC SPACE HEATING—KATHABAR HUMIDITY CONDITIONING

For more details circle NED-963 J3 on enclosed inquiry slip

NOW...DUMORE TOOLS

put former hand jobs on profitable, production basis

. . . with hand grinders

Dumore high-speed hand grinders are job-proved for high production grinding . . . from snagging castings to such operations as grinding bullet mold contours (as illustrated). Power-packed motors and perfect balance assure dependable, trouble-free, more profitable service. Choose from five sizes of DUMORE precision-built hand grinders (1/40 to 1/4 HP).

. . . with Dumore Flex-Shaft tools

Put the power in your hand and the power plant on the bench with a Dumore Flex-Shaft tool. Get extra control . . . reduce fatigue for steadier production. Made with high quality Dumore motors (1/20 to 1/4 HP), heavy-duty shafts and lightweight handpieces.

Dumore tools are stocked by leading industrial distributors everywhere.

DUMORE PRECISION TOOLS
The Dumore Company
1333 Seventeenth St. • Racine, Wis.

For more details circle NED-964 J3 on enclosed inquiry slip

Best Buy in Hoists!

. . . and here's why!

1. Low operating cost.
2. Safe! The *only* hoist with self-locking, double worm gear which acts as its own load brake.
3. Steel from hook to hook—heavy, positive acting limit switches.
4. Dual voltage motors quickly convert from 220 to 440 volts or vice-versa.
5. Just hang it up, plug in, pull cord (one-hand control) and it goes to work.
6. Assured performance, backed by the exclusive Whiting Warranty Plan.
7. Most standard models shipped from stock.

WHITING ELECTRIC CHAIN HOISTS

Send for Illustrated Bulletin H-112

WHITING CORPORATION
15660 Lathrop Ave., Harvey, Ill.

For more details circle NED-965 J3 on enclosed inquiry slip

HOW YOU CAN SAVE

with ISOMODE* PAD vibration control

A standard, economical package of ten ISOMODE* PADS provides vibration control for as much as 80 tons of machinery—enough to demonstrate that you can save four ways:

1. Save bolting or lagging—machines stay put on any type floor.
2. Save workers' energy — noise levels go down.
3. Save through increased efficiency—vibration won't interfere with nearby equipment or offices.
4. Save maintenance — there's less strain on machines, less building damage.

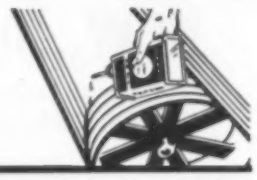
And all at small cost!, Simply cut to size — no waste. Write for price data and application bulletin No. 415.

*Trade Mark

THE MB MANUFACTURING COMPANY, INC.
1066 State Street, New Haven 11, Conn.

For more details circle NED-966 J3 on enclosed inquiry slip

for Maximum Efficiency



Also Prolongs Belt Life
BELTRACTION weatherproofs, oilproofs and waterproofs all kinds of belts—works foreign substances off of belts and keeps them clean — minimizes belt replacements.

TREAT BELTS WITH Beltraction
Every Time You Lubricate Bearings!

110,000 users of BELTRACTION Liquid Belt Treatment find that it pays to make it a habit to apply this effective conditioner to belts regularly. Because BELTRACTION increases traction 200 to 500%, it prevents costly delays and breakdowns due to belt slippage. Especially recommended for V-belts. Write for interesting folder "Horse Power Where and When You Need It" which gives results of tests of BELTRACTION by United States Testing Company, Illinois Institute of Technology and other prominent laboratories.

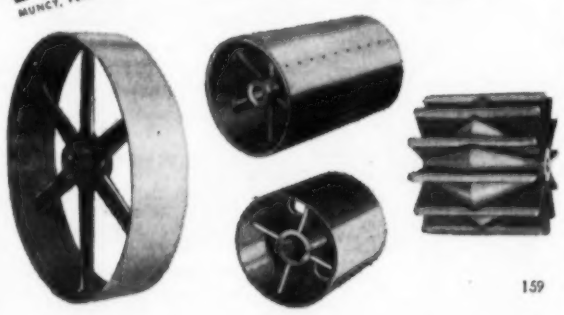
BELTRACTION COMPANY
1817 W. Winona St. Chicago 40, Ill.

FOR ALL TYPES OF BELTS • V-TYPE, FLAT OR ROUND

▲ For more details circle NED-967 J3 on enclosed inquiry slip ▲

SPROUT WALDRON S/W MUNCY, PENNSYLVANIA

PULLEYS
SOLID FACE and BELT SAVER



159

In handling rough, abrasive materials, S/W exclusive Belt Saver Pulleys are lengthening belt life as much as 400%. Equally well recognized is the S/W Blue Face Pulley Line in standard and made-to-order types and sizes. Write today for literature. Sprout-Waldron & Co., Inc., 8 Logan Street, Muncy, Penna.

Vertical Mixers, Attrition Mills, Rotary Feeders, Ribbon Type Mixers, Crushers, Knife Cutters, Continuous Mixers, Roller Mills, Separators, Pulleys

SPROUT-WALDRON

▲ For more details circle NED-968 J3 on enclosed inquiry slip ▲

GRIND - POLISH - ETCH
WITH THIS 100,000 R.P.M.
NU-JETT
PENCIL GRINDER

NU-JETT DOES ANY FINE, PRECISION
GRINDING
POLISHING AND FINISHING
ETCHING, DEBURRING, CARVING

COMPLETE GRINDER
$30.
Includes pencil grinder, air control valve, air filter, 5' hose, chuck wrench.

NU-JETT IS An entirely new pencil grinder, weighing 4 oz. Air driven, it uses 50 lbs. or more pressure.

NU-JETT USES Carbide or steel burrs. Triples life of abrasive wheels due to high speed.

DISTRIBUTORS WANTED
THROUGHOUT U.S. AND CANADA

"Easy to Control as a lead pencil"

NU-JETT PRODUCTS
1355 Michigan St., N.E. Ph. 98831 Grand Rapids, Mich.

▲ For more details circle NED-969 J3 on enclosed inquiry slip ▲

New Literature & Catalogs

Blast Cleaning

Pangborn Corp.—Designed for batch blast cleaning of castings, forgings and heat-treated parts, the Blastmaster Rotoblast line of machines has been expanded by the inclusion of 3 and 18 cu ft capacity models. Bulletin 223-A describes and illustrates all models, which offer high-production conveyorized operation.

▲ For more details circle NED-970 J3 on enclosed inquiry slip ▲

Totally-Enclosed Dry-Type Transformer

Westinghouse Electric Corp. — Made in ratings from 3 to 50 kva for either indoor or outdoor service, type E totally-enclosed dry-type transformer is described in 8-page illustrated bulletin B-5182. Unit has class H insulation, and will operate where dirt, lint, and nonexplosive dust are encountered.

▲ For more details circle NED-971 J3 on enclosed inquiry slip ▲

Custom Extruded Plastics

Anchor Plastics Co.—Latest applications of thermoplastic rods, tubes and shapes are illustrated in 12-page booklet "Extruded Plastics." Special sections deal with general range and size of extrusions and the facilities available to fabricate them. Summary of properties together with a table facilitates rapid selection of the needed thermoplastic.

▲ For more details circle NED-972 J3 on enclosed inquiry slip ▲

Work Positioning Spotlight

Sciaky Bros. Inc.—Permitting production machine operators to accurately position work in blind operations on all types of equipment, locating spotlight is clearly visible under all shop conditions on all materials. Unit is described and illustrated in bulletin No. 309-10. It is attached permanently to the machine, and can be easily adjusted to focus its spot at any desired guide point.

▲ For more details circle NED-973 J3 on enclosed inquiry slip ▲

Staple Sample Folder

Saranac Machine Co.—Actual samples of staples that are cut and driven from continuous coils of low cost standard wire are shown in folder SS-1252. Diagrams explaining how they are formed on the spot, driven and clinched instantaneously, all in one motion by Saranac stapling heads are included.

▲ For more details circle NED-974 J3 on enclosed inquiry slip ▲

Glass Products

Kopp Glass, Inc. — 20-page booklet "Engineered Glass" describes the methods by which company glass products are made, and includes data on light transmission and distribution, physical properties such as thermal shock resistance, dimensional conformation, selective color transmission and other requirements. Specialized lenses for various industrial applications are illustrated.

▲ For more details circle NED-975 J3 on enclosed inquiry slip ▲

Need Holes in Concrete?

YOU GET MORE HOLES WITH TERMITE DRILLS!

Penetrate toughest concrete with less pressure and with less drill wear . . . with TERMITE DRILLS. Pulverizing action eliminates objectionable noise. Exclusive construction gives you cleaner, more accurate holes in less time and at less cost. Use with standard electric drills or air motors.

Free Factory Resharpening

Write for FREE literature and prices

TERMITE DRILLS

Lengths up to 36". Standard diameters from 3/16" to 5". Other diameters up to 8" on special order.

TERMITE DRILLS, INC.
84 N. Lotus Ave., Pasadena 8, California

▲ For more details circle NED-976 J3 on enclosed inquiry slip ▲

introducing—
the Coffing SAFETY-PULL RATCHET LEVER HOIST

COIL CHAIN

The Model RG is now available in 1,500- and 3,000-lb. capacities — other sizes will follow.

The Model RG is completely new, yet incorporates the time-proved ratchet and pawl principle originated by Coffing. Holds positively —always. No friction brakes to slip or freeze.

★ ★ ★

Sold by Industrial Distributors everywhere

Many New Advantages:

COIL CHAIN. Swings or wraps in any direction for greater flexibility in use.

SIX OPERATING POSITIONS. Handle operates in any position, works on full or partial strokes.

BIG SAFETY FACTOR. The Model RG has 100 percent overload safety factor, although warranty covers only up to rated capacity.

SIMPLE TO SERVICE. The Model RG may be completely disassembled with only a screwdriver for easy servicing.

Find out more about the new Model RG hoist. Write for Bulletin X9R.

Quik-Lift Electric Hoists
Hoist-Alls • Load Binders
Mighty-Midget Pullers
Spur-Geared Hoists
Differential Chain Hoists
I-Beam Trolleys

COFFING HOIST COMPANY
DANVILLE, ILLINOIS

▲ For more details circle NED-977 J3 on enclosed inquiry slip ▲

A Rugged High-Speed Loading Dock
...Where and When You Want It!

MAGCOA'S Portable MAGNESIUM YARD RAMP

• One man moves it! • Hydraulic lift positions it! • Material starts to move, fast! You get fuller use of present facilities, lift trucks and operators—less idle time. You cut demurrage charges . . . eliminate additional investment in inflexible, immovable dock facilities.

Magcoa engineering and manufacture converts light-weight magnesium into a rugged, heavy-duty Yard Ramp . . . braced like a bridge . . . for your specific requirements. Capacities to 16,000 lbs. in five basic sizes—or a "special"—delivered with usual Magcoa promptness, thanks to mass production methods.

More than 1000 companies are already looking into how the new Yard Ramp can save them money. Free new literature can help you do the same thing. At the same time learn how light-weight, heavy-duty Magcoa Dockboards can save time and money on stationary docks. Write today.

MAGNESIUM COMPANY OF AMERICA
MATERIALS HANDLING DIV. • EAST CHICAGO 6, IND.

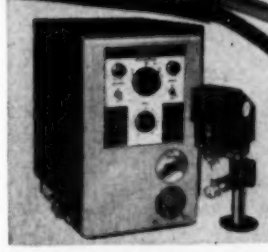
▲ For Yard Ramp data circle NED-978 J3 on enclosed inquiry slip ▲
▲ For dock board data circle NED-979 J3 on enclosed inquiry slip ▲

***make it* STRONGER**
***do it* FASTER**
with

Super-flexible stranded copper wire welded to tin-plated brass lug (.020")

RAYTHEON WELDPOWER*

Stranded tinned copper wire welded to cadmium-plated socket for "grain of wheat" pilot light.



Raytheon Condenser Weldpower Control units are available in three sizes with appropriate Weldpower Heads.

Attaching copper lead wires is only one example of the many applications where Raytheon Weldpower Units eliminate slow, less satisfactory methods.

Let us show you how Raytheon Weldpower can improve production of small parts involving assembly of ferrous, non-ferrous or dissimilar metals. Send samples and details . . . or write for complete information. Address Dept. NE-9

*Reg. U. S. Pat. Off.

RAYTHEON
Excellence in Electronics
RAYTHEON MANUFACTURING COMPANY
Equipment Sales Division, Waltham 54, Mass.
DISTRICT OFFICES: Boston • New York • Cleveland • Chicago
New Orleans • Los Angeles (Wilmington) • San Francisco • Seattle
INTERNATIONAL DIVISION, 19 RECTOR STREET, NEW YORK CITY

▲ For more details circle NED-980 J3 on enclosed inquiry slip ▲

For SAFETY in marking all kinds of Metal

Use SAFETY "HEVI-BEVL" LETTERS and FIGURES

The most economical all purpose grade of Safety Letters and Figures. Will give outstanding service on almost any marking job. All sizes —1/32" to 1" characters from stock. Mecco Safety Steel for No Spalling and No Mushrooming.

Write for Catalog 100.

- No Spall
- No Mushroom
- More Service
- Thumb Side Marks for easy identification

Mecco SAFETY MARKING TOOLS M.E.CUNNINGHAM CO.

1055 CHATEAU STREET, PITTSBURGH 33, PA.

For more details circle NED-981 J3 on enclosed inquiry slip

■ A high-grade woven Monel wire screen is the heart of the Yarway Fine Screen Strainer—one reason why hundreds of thousands of Yarways police the pipelines in nearly every industry, stopping rust, scale and dirt from clogging vital equipment.

Another reason why it pays to select Yarways—strainer screens come out with cap when removed from body. Eliminates costly time delays in fishing out old screens from strainer bodies.

More reasons—superior finish to prevent rust and for better appearance; straight threads, machined faces and spark-plug-type gaskets on screen caps; ten sizes from ½" to 3".

Yarway Strainers are stocked for IMMEDIATE DELIVERY by 250 local distributors. Write for Bulletin S-203.

YARNALL-WARING COMPANY
131 Mermaid Avenue, Philadelphia 18, Pa.

YARWAY fine screen strainers

For more details circle NED-982 J3 on enclosed inquiry slip

New Processes & Materials

FLOORING CEMENT resists oils, greases, solvents

An oxychloride type cement, Sylox flooring material is highly resistant to absorption of oil, grease, fats and solvents of many kinds. It is a complete flooring product in itself and requires no outside ingredients, not even water. Intended to cover at an average depth of ½-in., product is proportioned and packaged at the factory for the individual job. It is useful in areas where semidecorative service floor is desirable and can be applied directly over old surfaces of concrete or wood. Choice of several colors is offered. Made by **United Laboratories, Inc.**, 16804 Euclid Ave., Cleveland 12, O.

For more details circle NED-983 J3 on enclosed inquiry slip

TEMPERATURE INDICATORS now signal 525° F temperature

Tempil sticks, lacquer and pellets are now available to signal an attained temperature of 525° F. These products show attained temperatures by changing form, and are now available over a range to cover temperatures from 113 to 2500° F. Made by **Tempil Corp.**, 11 W. 25th St., New York 10, N. Y.

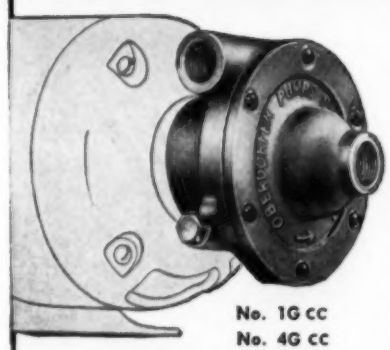
For more details circle NED-984 J3 on enclosed inquiry slip

CONDUCTIVE COATING developed for static bleed-off

Staticote is a conductive coating intended for static bleed-off, reduction of radio noise and other uses. It is formulated to specific resistances from 1/10-ohm to 30 megohms per square, based on 1 mil thickness. Application can be to all types of materials, including rubber. Staticote A has good lubricity characteristics and can be used both as a lubricant and static bleed-off material. Staticote N-1 has high resistance to rain erosion and temperatures ranging from −80 to 800° F. Both can be air dried or baked. Made by **Booker-Cooper, Inc.**, Engineering Div., Dept. N, 8487 Melrose Pl., Los Angeles 46, Calif.

For more details circle NED-985 J3 on enclosed inquiry slip

Close coupled, centrifugal, motor driven OBERDORFER BRONZE PUMPS



No. 1G cc
No. 4G cc

1G cc is complete motor-pump unit with 1/12 H.P., 3450 RPM, 110 volt, A.C. ball bearing thermal overload motor. Motor frame Nema 42 with end bell machined for pump mounting. Pump has mechanical Rotary face type seal.

4G cc is complete motor-pump unit with ⅓ H.P., 3450 RPM, 110 volt, A.C. thermal overload motor. Motor frame Nema 56 with end bell machined for pump mounting. Pump has mechanical Rotary face type seal.

OVERALL DIMENSIONS—Motor and Pump Unit

Pump No.	Height	Width	Length	Suction	Discharge
1G cc	5"	4¾"	9"	⅜ N.P.T.	⅜ N.P.T.
4G cc	6⅝"	6 5/16"	11¼"	¾ N.P.T.	½ N.P.T.

CAPACITIES—Gal. per min. —3450 RPM - Foot Water Head

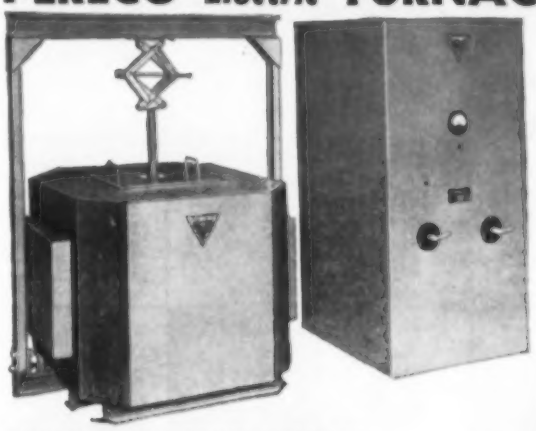
Ft. Water	0	5	10	15	20	25	30	35
1G cc	7	6½	5	4	1½	—	—	—
4G cc	23	22	20	18	15	12	8	2

See our catalog in Sweet's PRODUCT DESIGN File

Oberdorfer Foundries, Inc., Ind. Pump Div.
239 Thompson Rd. Syracuse, N. Y.

For more details circle NED-986 J3 on enclosed inquiry slip

PERECO Electric FURNACES



PRESSURE SINTERING FURNACE

This high-temperature "pressure-sintering" Pereco Furnace (Model PF-1414-CR) is another of the many research applications for the versatile Pereco High-Temperature Furnaces. It has wide application for sintering bronze, iron, etc., under varying pressures at temperatures up to 2500° F.; and under normal atmosphere or "gas-tight" for controlled, reducing or neutral atmospheres. Compact overall size, with chamber size 14" x 14" x 18" deep. Furnished with any standard make or type temperature control to meet individual needs. Pivoted pressure-jack frame for easy loading. Ask for full specifications—or details on other models.

Standard and special furnaces for temperatures 450° to 5000° F.

PERENY EQPT. CO.
Dept. G,
893 Chambers Rd.,
Columbus 12, Ohio

PERENY EQUIPMENT COLUMBUS OHIO

For more details circle NED-987 J3 on enclosed inquiry slip

The Original...

Fafnir Wide Inner Ring Bearing with Self-Locking Collar and Mechani-Seals

A Time-Tested and Proven Feature of Fafnir Ball Bearing Power Transmission Units

Counterbored, eccentric cam, mated construction of collar and inner ring assures positive locking action without set screws, lock nuts or adapters

FAFNIR BALL BEARINGS

Most Complete Line in America

THE FAFNIR BEARING COMPANY, NEW BRITAIN, CONN.

For more details circle NED-988 J3 on enclosed inquiry slip

OPW visi-flo

One Look to Know!

OPW VISI-FLO sight glass indicators are a trustworthy visible means of alerting you as to rate of flow, viscosity, color of liquids, clarity, and purity of product.

OPW VISI-FLO protects you against line stoppage, helps maintain uniformity, a high standard of product quality and an even continuity of production.

Write

Write for free Bulletin F-6 describing complete VISI-FLO line, from plain types to magnetic indicating types.

OPW CORPORATION CINCINNATI 25, OHIO

OPW CORPORATION 2735 Colerain Ave. Cincinnati 25, Ohio

For more details circle NED-989 J3 on enclosed inquiry slip

ADAPTABILITY! Singly, or in combination, these valves provide 2-way, 3-way or 4-way control. Hand, foot, cam or solenoid operated. Every pipe size from ¼" through 1¼". Write for Bulletin 231.

HANNIFIN

Hannifin Corporation, 1127 S. Kilbourn Ave., Chicago 24, Ill.
AIR AND HYDRAULIC CYLINDERS • PRESSES • AIR CONTROL VALVES

For more details circle NED-990 J3 on enclosed inquiry slip

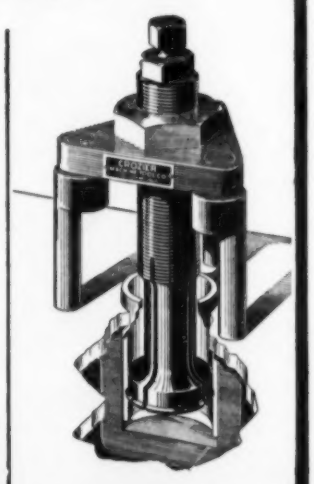
NEW EXTRACTOR

removes bushings from blind holes

...cuts time 75 per cent

The entirely new method of extracting bushings, bearings, sleeves, liners, etc. Eliminates necessity for machining, minimizes the hazard of injury to casings or excessive dismantling of equipment, handles holes from ½ to 2"—over 5 tons have been extracted with unit. Eliminates as much as 75 per cent of labor and time, slashes inventory.

For complete information write Department NED-9



CROZIER *Machine Tool Co.*

684 NO. PRAIRIE AVENUE, HAWTHORNE, CALIFORNIA

For more details circle NED-991 J3 on enclosed inquiry slip

The type Tapping Screw you require will vary with: 1. kind of material; 2. thickness of material; 3. the method used for making the hole.*

Lamson Tapping Screws are precision made for maximum holding even in thin material, fully hardened to permit the thread crests to form clean threads without stripping hole. Available in a wide range of head and point combinations. A "special" Tapping Screw to many . . . is a "stock" item at Lamson.

This information is available in tabular form for easy reference. Write for as many copies as you need.

The LAMSON & SESSIONS CO.

1971 West 85th St. • Cleveland 2, Ohio
CLEVELAND AND KENT, OHIO • BIRMINGHAM • CHICAGO

For more details circle NED-992 J3 on enclosed inquiry slip

New Literature & Catalogs

Spectrophotometry Explained

Beckman Instruments, Inc.—"What Every Executive Should Know about Spectrophotometry" is 16-page booklet which reviews the whole story of this technique for analyzing unknown substances by measuring amount of light they absorb. Some individual case studies are given.

For more details circle NED-993 J3 on enclosed inquiry slip

Multiple Spindle Drill Heads

Durant Tool Supply Co.—Multiple spindle drill heads for drilling, reaming, tapping, boring and milling are briefly described and illustrated in 4-page folder. Six different types of drill heads in 17 sizes are available to meet most multiple drilling applications.

For more details circle NED-994 J3 on enclosed inquiry slip

Welding Head & Electrode Holder

Sciaky Bros. Inc.—Illustrated bulletins 307-10 and 310-10 respectively describe an upper welding head which fits any electric resistance welder to give gas tight seams and Micro-Metric upper electrode holder which provides simple and accurate alignment of electrode tips. Mounting dimensions and complete specifications are given for both attachments.

For more details circle NED-995 J3 on enclosed inquiry slip

Metal Sawing Hints

Clemson Bros. Inc.—28-page pocket size booklet gives do's and don'ts on metal sawing with both hand and power blades. Types of blades for cutting standard materials are suggested, complete with recommended speeds and feeds for power band saws. Prices and specifications of the complete company line are also furnished.

For more details circle NED-996 J3 on enclosed inquiry slip

Magnesium Fabrication & Sand Castings

Magline Inc.—Detailed information on firm's diversified facilities for forming, stamping, deep drawing, machining, spinning, welding and assembly is contained in 8-page brochure on magnesium fabrication and sand castings. Also described are research, design and engineering services available for development of magnesium applications to new or existing products.

For more details circle NED-997 J3 on enclosed inquiry slip

Induction Heating Equipment

Lepel High Frequency Laboratories, Inc.—Heat treating, metal joining, bombarding and melting are among functions of high frequency induction heating equipment cataloged in 36-page illustrated brochure. Nine models of electronic tube generators and five spark gap convertors are shown and specified along with work handling equipment and accessories.

For more details circle NED-998 J3 on enclosed inquiry slip

Fact-filled folder on request . . . showing how economies in costs, labor and time are achieved with the GREEN ENGRAVER.

Routs Models
Profiles Engraves

Etching attachment and other special equipment for industrial uses are available.

Mark your own symbols, numbers, lettering, on your small parts, tools, identification and name plates . . . easily, simply, quickly . . . tracing from a master with the GREEN ENGRAVER.

Widely used in electronic and plastic fields, in machine tool shops and wherever permanent marking is needed. The GREEN ENGRAVER engraves equally well on metals, plastic, wood, hard rubber and glass.

Green Instrument Co. INCORPORATED

375 PUTNAM AVE., CAMBRIDGE, MASS.
Visit us at National Instrument Exhibit, Booth 262

For more details circle NED-999 J3 on enclosed inquiry slip

Autographs ADHESIVE BACK METAL NAMEPLATES

FASTER, LESS-COSTLY

PERMANENT PRODUCT IDENTIFICATION

Take the "cost" out of product indentification with solvent-activated, adhesive-back "AUTOGRAPHS" Mount them in seconds with your fingertips No brads, rivets or tools are used yet they stick to their job for life on any surface Colorfully lithographed "AUTOGRAPHS" are produced in many sizes on many types of metal Attractively designed, too, from your letterhead, blue print or rough sketch

Tag-a-long GOLF CARTS CARTS INC. DELAVAN, WIS.

LYMAN SIGHTS METALLIC AND TELESCOPIC
IDEAL RELOADING TOOLS • CUTTS COMPS

LeFebure CORP. CEDAR RAPIDS IOWA U.S.A.

ADVERTISING IMPRESSIONS THAT *STICK!*

WRITE TODAY for prices and "try before you buy" samples!

METALcraft INC. MASON CITY, IOWA

For more details circle NED-1000 J3 on enclosed inquiry slip

20 times more

Filtering Area with Nugent Cutting Oil and Coolant Filters

Nugent Pressure Filter installed on turret lathe for filtering cutting compound.

NUGENT Cutting Oil and Coolant Filters provide 20 times more filtering area than other filters of comparable size. This means better filtering—and better filtering means a great savings in lubricants, longer tool life and fewer rejects.

Nugent pressure filters of this type are built in capacities from ¼ to 350 GPM for any machine that uses oil or cutting fluids.

Write for Complete Information

Wm. W. *Nugent* & Co., Inc.
401 N. Hermitage Ave. CHICAGO 22, ILLINOIS

Est. 1897

Oil Filters, Oiling and Filtering Systems, Telescopic Oilers, Oiling Devices, Sight Feed Valves, Flow Indicators . . . *Representatives in Principal Cities*

For more details circle NED-1001 J3 on enclosed inquiry slip

***LOW* TEMPERATURE CHESTS for Heavy Duty Use**

- Ranges to −140°F.
- Hermetically Sealed Refrigeration Units.
- Micrometer Adjustment Maintains Temperature to ±2°F.
- Automatic overload protection.
- 9 Standard Models
- Heating Cycle Available

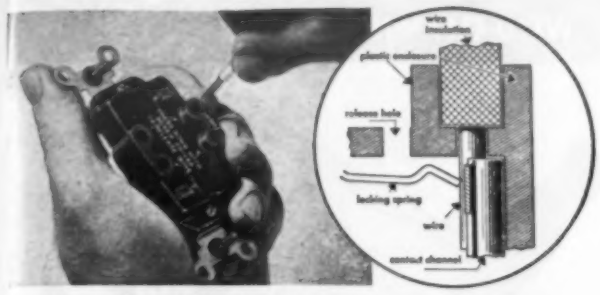
Model LTP—10-150 has heavily insulated cabinet packed with extra thick, low-conductivity insulation. Test space 33" x 26" x 20" has water-tight stainless steel liner refrigerated on four sides with heavy duty all copper coil welded for trouble-free service. Snap locks positively seal double-gasket on counterbalanced lid. Vibration eliminators on all tubing. Recessed controls are placed for convenience and accessibility. Designed for long, trouble-free service—manufactured to insure dependable low cost operation.

Write for complete details on M & M cold temperature chests and equipment for all types of environmental testing.

MURPHY & MILLER, Inc.
1334 South Michigan Avenue • Chicago 5, Illinois

For more details circle NED-1002 J3 on enclosed inquiry slip

NOW...just push in the wires



New G-E "PRESSURE-LOCK" terminals connect wiring devices automatically—without binding screws

You can now make electrical connections by simply pushing straight, stripped wires into these new "pressure-lock" terminals. The spring lock holds the wire securely against a contact channel. Instantly released when desired. There are no binding screws... no looping, hooking, or crimping operations.

These terminals are featured in the new GE3800-line of outlets, switches, and lampholders. Listed by Underwriters' Laboratories, Inc.

Write for illustrated folder. Section D105-961, Construction Materials Division, General Electric Co., Bridgeport 2, Connecticut.

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You can put your confidence in—

GENERAL ELECTRIC

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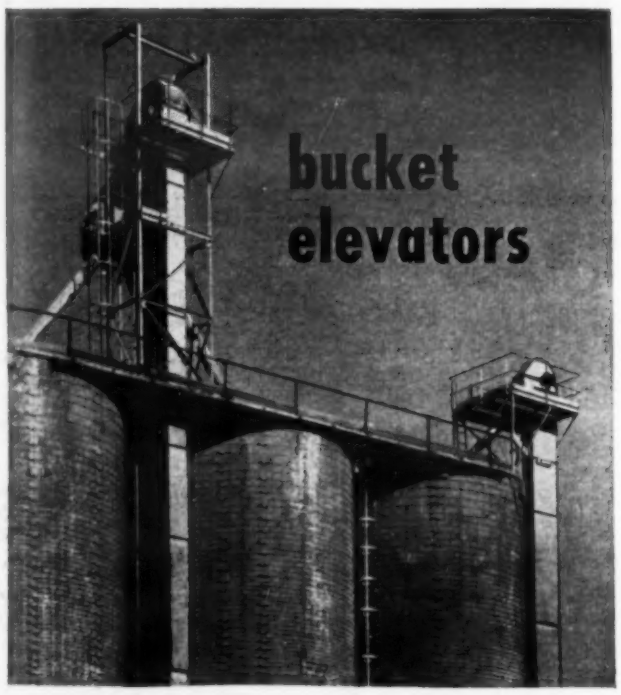

THE JEFFREY MANUFACTURING CO.
Columbus 16, Ohio

IF IT'S MINED, PROCESSED OR MOVED ...IT'S A JOB FOR JEFFREY!

sales offices and distributors in principal cities

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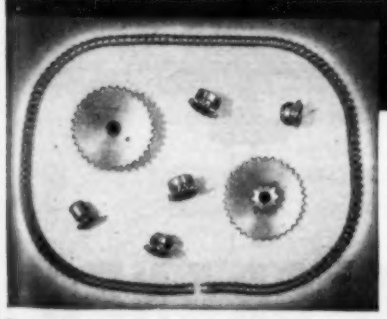
Rugged Winzeler Sprockets Help Drive the B.V.I. Sander



Winzeler Ladder Chain Stamped Sprockets bring smooth, dependable performance, long life and *low cost* to the excellent Burgess Belt Sander. Built for toughest sanding jobs, the BVI uses only the sturdiest components.

Cut your costs.. improve quality and performance .. get the uniformity and accuracy only *Winzeler* Stamped Gears can give. Stock and custom dies. Assemblies by staking, brazing, riveting. Production runs on modern high speed equipment assure deliveries *on time!*

***WRITE FOR FREE** folder describing our facilities, tools, assemblies and various Stamped Gears. Includes data and tables. Get samples, ideas, and low prices.*

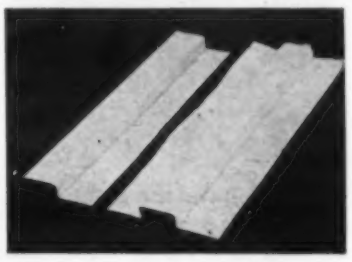
WINZELER Stamped Gears

WINZELER MANUFACTURING & TOOL CO.
1712 WEST ARCADE PLACE, CHICAGO 12, ILLINOIS

▲ For more details circle NED-1005 J3 on enclosed inquiry slip ▲

New Processes & Materials

GASKETING MATERIAL is silicone rubber enveloped in Teflon or Kel-F for stability



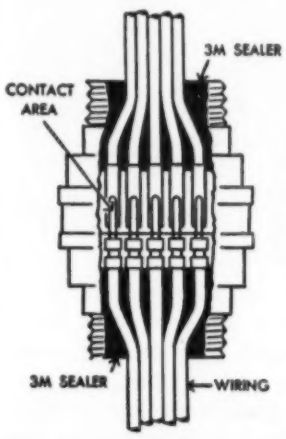
Combining excellent high and low temperature properties of silicone rubber with the chemical inertness of Teflon or Kel-F, Fluorlastic composite gasket material is offered in wide range of sizes and shapes. Resilient core of silicone rubber or sponge is completely protected from chemical attack by the fluorocarbon envelope.

Silicone core is available in solid stocks of various durometer hardness and in sponge. The envelope of Kel-F or Teflon ranges in thickness from 0.0025 to 0.03-in., depending upon the service. Strip type gaskets in various shapes and sizes include lengths up to 96 in. and widths of 4 in. Readily mountable, gaskets are used for hood, duct and oven closures where corrosive conditions exist. In ring form, Kel-F envelopes are generally used because a completely impervious covering can be formed which will withstand complete immersion in highly corrosive substances. Other applications are as door seals and joints where both cushioning and sealing are required. Developed by **Connecticut Hard Rubber Co.**, 415 East St., New Haven 9, Conn.

▲ For more details circle NED-1006 J3 on enclosed inquiry slip ▲

DIELECTRIC SEALER acts as flexible potting compound

Originally developed for the aircraft industry, EC-1120 dielectric sealer is now available to the electrical manufacturing industry. This flexible synthetic rubber material is applied as a liquid and cures by chemical action to a tough, firm, rubber consistency that provides long lasting protection against vibration and corrosion. It retains its physical properties throughout a temperature range of −65 to 200° F, has excellent dielectric properties and resists moisture and water. Proper amount of accelerator to activate the base material is supplied with each container, latter being available in pint to gallon sizes. Made by **Minnesota Mining & Mfg. Co.**, Adhesives & Coatings Div., Dept. NED, 423 Piquette Ave., Detroit 2, Mich.



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Cheese
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✓*no back splash*
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✓*harmless to finest finish*

HYDRO·AIR PRESSURE WASHER $9.95

Connects to regular air and hot or cold water supply. Precise control of air and water blasts heavy dirt and grease or rinses sheets and small parts with a penetrating spray.

D & M PRODUCTS, INC.
30 North Raymond Avenue • Pasadena 1, California

Order through your regular supplier of cleaning compounds, or direct.

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Electronic Temperature Control

...with Alnor Accuracy

Alnor, pioneer in the field of electronic temperature instruments, brings you automatic, precise temperature control for heat-treating furnaces, bake ovens—in fact, for any heating device whether electrically heated or fuel fired. It's the Alnor Temperature Controller—simple in design and operation, its accuracy proved on thousands of installations in many industries.

Easily and quickly installed, this instrument is ready to give you accurate controller service on new or existing heating equipment temperature—you merely set the pointer at the desired temperature and forget your indicating and controlling problems. But find out for yourself how Alnor accuracy and dependability can serve you in controller service; write today for complete details on the Alnor Temperature Controller . . . Alnor accuracy at a price you can afford. Illinois Testing Laboratories, Inc., Rm. 529, 420 N. La Salle Street, Chicago 10, Illinois.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

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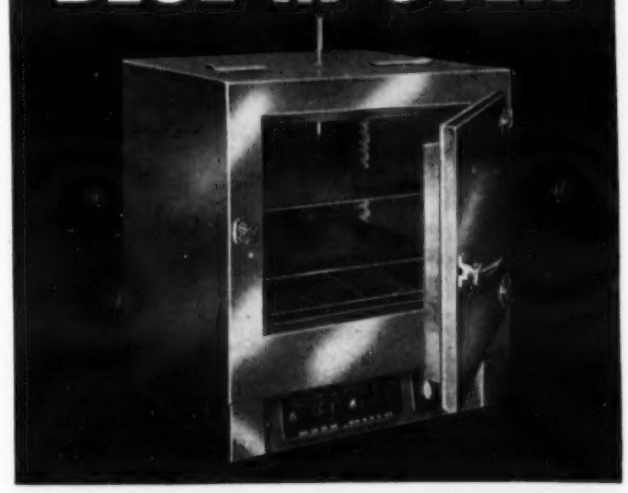
NEW...A BETTER BLUE M OVEN



New Design... for easier operation.
Greater temperature range... 37°C. to 288°C.

Power saver... The Blue M Power Selector Switch saves you dollars of current per year, by rating input wattage to temperature. A real time saver too... with it you can heat the oven quickly, then lower to the wattage necessary to maintain constant temperatures. You don't overshoot or undershoot with a Blue M Oven.

Automatic Hydraulic Thermostat . . . response sensitivity ±½°C... keeps temperatures at desired level. U. L. approved.

New Convenience . . . Recessed control panel protects controls from spillage or accidental bumping. All controls are grouped for easy handling.

All Stainless Steel . . . A beautiful practical oven especially resistant to corrosive atmospheres. Dual banked extra heavy duty Modella Elements. All six sides now have 3½" of compressed Fiberglas insulation. Chromed hardware, pressure release latch. Before you buy... ask your dealer to show you a Blue M Oven ...see for yourself how much you get for your money.

SPECIFICATIONS AND PRICES
(All ovens ready for instant use)

Model	Inside Dim. (inches) W.	D.	H.	Max. temp.	Prices
OV-18SA	19	18	15	288°C.	$275.00
*OV-18A	19	18	15	288°C.	195.00
OV-12	12	12	12	232°C.	137.50
OV-8	8	8	8	204°C.	87.00

*Stainless Steel interior only
(Prices are for 115 Volts 50/60C, AC...230 Volt or DC models $10.00 extra).

BLUE M LINE

BLUE M ELECTRIC COMPANY
306-308 West 69th Street, Chicago, Illinois

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WAR SURPLUS SAVINGS

SAVE UP TO 85%

NEW INSIDE – OUTSIDE VERNIER CALIPERS
German made by one of Europe's leading specialists in precision tools. Measures inside-outside & depth in .001" to 6" in 1000ths and 1/10mm to 150mm in 10ths. 9.75
MICROMETERS – 0" to 1" in 1,000ths. Has lock-nut & ratchet ...ONLY – . . . 9.75

STAND MAGNIFIER
Handy stand magnifier with universal adjustments. Overall height: 6". Has powerful, clear magnifying lens. 1.49

BENDIX HYDRAULIC PUMP & MOTOR
Has 3-1/2 GPM capacity at 600 PSI. Motor is 1½ HP, 24V, D.C. Will operate on either 12 or 32V, DC current. Has built-in relief valve adj. to 1500 PSI. This unit ideal for hyd. lifts, portable loaders, etc. 19.50

MAGNETIC BASE–INDICATOR HOLDER...
A time saver for precision checking. Magnetic base fits curved or flat surface. Has 45-50 lb. pull. Stainless steel 6½" rod mounted in ball socket permits universal settings . . 3.95
Note: We have complete line of instruments, depth gauges, inspection mirrors, etc. WRITE TODAY

HYDRAULIC HAND PUMP
Operating pressure 2000 PSI. Cap., 1.5 cu. in per complete cycle . . . 12.75

GEAR HEAD MOTORS
Heavy duty, G.E. Gear Head motor. 2 HP, 24V. DC, 125 amp., reversible motor drives a reduction gear unit giving 36 to 1 ratio at take-off. Also will operate on 6 or 12 volts.
36 to 1 G.E. (306 shaft RPM)
28 to 1 Eclipse (130 shaft RPM)
40 to 1 Eclipse (110 shaft RPM)
10.95 EA.

HYDRAULIC ACCUMULATORS
A–2B FLOATING PISTON TYPE – 4"x 18" Built to stand 2,000 PSI 12.75
A–9 VICKERS – 10" dia. Ball type. Built to stand 2000 P.S.I. 24.75

ELECTRIC ACTUATORS
Hundreds of uses for any mechanical device needing controlled 2 way action. Opens, closes, raises or lowers doors – windows – gates – valves. CTU-2 – Foote Linear Actuator – 24 volt, DC, 8500 RPM, 1/8 HP – series wound motor. 6½" stroke in 13½ sec. Compression and tension loads up to 750 lbs. Adjustable micro switch for limits of travel. Overall length., retracted 11" 7.95
We also carry many more sizes and types of Actuators. Write today for information.

HYDRAULIC CYLINDERS
Gives 20,000 lb. thrust (push or pull) using 1500 PSI line pressure as obtained from our hydraulic pumps. Will produce up to 40,000 lb. thrust with 3000 PSI. Can also be used on low pressure air systems. 4" bore; 18" stroke; 30½" length. Ideal for roof form – shop machinery. 29.75

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We stock over 30,000 Hydraulic Cylinders, Valves, Pumps, Accumulators, Hand Pumps, Motors, Hose, etc. All at Money Saving Prices.

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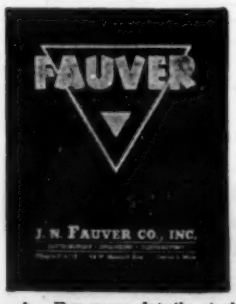
An "OIL AIRE" System consists of Solenoid Valve, Filter, Water Separator, Regulating Valve, Lubricator, Reservoir, Pressure Switch and Low-level Indicator.

As diagramed above, "OIL AIRE" is accomplished by compressed air entering the unit at 100 psi., passing through the regulator, the pressure is reduced to 10 psi. As the oil passes through the venturi, it draws the oil from the reservoir. Amount of oil is adjustable. The mixture of oil and air is thrust against a reclassifier which converts it to minute drops of oil, which in turn lubricate the bearings.

FAUVER

'OIL AIRE'

. . . is a fully automatic oiling system for plain bearings, ball and roller bearings, vees, slides, ways, rollers, cams, chains, gears, transmissions . . . it applies constant and uniform oil film to groups of bearings. "OIL AIRE" has no moving parts—it operates solely on compressed air—an advanced development in the field of lubrication. "OIL AIRE" atomizes oil into microscopic particles which are carried in the air-stream and distributed through tubing to the bearings. It circulates "OIL AIRE" within and throughout the bearing cavities . . . The constant flow of "OIL AIRE" cools and protects the bearings against abrasives and dirt while it lubricates. "OIL AIRE" Lubrication Systems can be installed to deliver lubricant at any point.



Send for complete information, describing briefly your lubrication problem.

J. N. FAUVER COMPANY, INC.
51 WEST HANCOCK, DETROIT 1
OFFICES...FLINT, GRAND RAPIDS
BRANCH...DAYTON, OHIO

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STEREO VIEWER
with fixed focus optical system

Two models of the Stereomatic table type stereo viewer show a series of 12 slides, readily interchanged by pressing a button. Both automatic and semiautomatic models are internally illuminated, operate on 110-v ac and have the same twin lens fixed focus optical system. Automatic model shows the entire series with an interval of some seconds between each slide, then automatically shut off. Pressing the starter button automatically reactivates the entire cycle. Semiautomatic model requires use of the button for each change of scene. Available from **Burke & James, Inc.**, 311 S. Wabash Ave., Chicago 4, Ill.

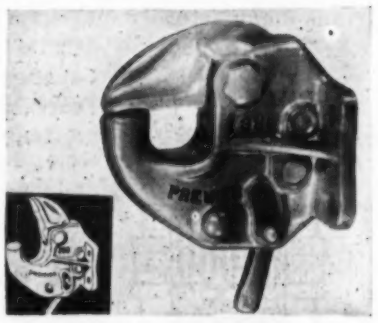
▲ For more details circle NED-1013 J3 on enclosed inquiry slip ▲

PLASTIC SEALANT
for impregnating pressure castings

Excessive "leaker" and "squirter" type pressure castings can be permanently sealed by Imprex, a plastic sealant. Material has good penetration properties and when hardened, there is no loss from evaporation. Seal can be washed off with water and does not require special handling or storage. It qualifies for government contracts calling for impregnation and is applied by standard methods and equipment. Made by **Tincher Products Co.**, 827 Borden Ave., Sycamore, Ill.

▲ For more details circle NED-1014 J3 on enclosed inquiry slip ▲

DRAWBAR HITCH
has breaking strength of 90,000 lb



Of the solid pintle type, model 380 truck drawbar hitch has a breaking strength of more than 90,000 lb, takes a 2-in. drawbar eye and weighs 27 lb. The companion heavy duty model 480 has a breaking strength in excess of 150,000 lb. Both models have a safety feature whereby the latch raises automatically to the open position if locking is not fully completed. Units are designed for one-hand operation, and the open position provides an unrestricted opening for engaging or disengaging the drawbar. Made by **Premier Mfg. Co.**, 409 S.W., Thirteenth Ave., Portland 5, Oreg.

▲ For more details circle NED-1015 J3 on enclosed inquiry slip ▲

Which of these answers your filter needs?

OIL BATH AIR FILTERS. All metal air filters scrub air clean in oil bath. For air intakes of engines, compressors and pressure blowers. Capacities up to 6500 CFM.

AIR FILTER PANELS. All metal, viscous impingement type washable filters designed to meet various requirements of efficiency, pressure drop, velocity and price.

ELECTROMAZE, ELECTRIC AIR FILTER. Removes dirt electrically where super-clean air is needed. Desk-drawer construction is easier to install, easier to service.

AIR INTAKE FILTER-SILENCERS. Both direct and remote-mounted types available for engine and compressor air intakes. Silencers only are available for turbo-chargers and lobe type superchargers.

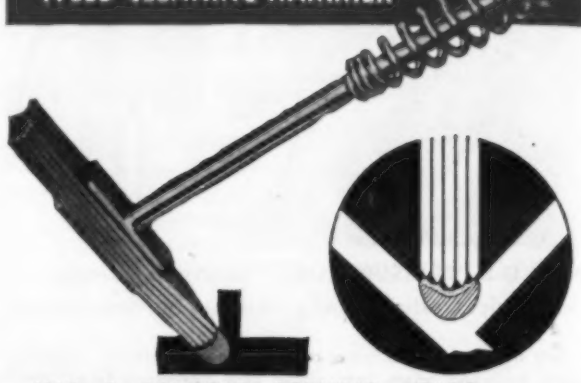
OIL AND FUEL FILTERS. Stacked filter discs provide large capacity, low pressure drop in small space. 640% more filtering area than conventional types.

Other Air-Maze products include: Unimaze and Multimaze oil-wetted filters, back fire flame and tank vent arresters, breather filters, oil separators, exhaust spark arresters, pipeline filters and many others. For detailed information on the complete Air-Maze line send for your free copy of the booklet, "Air-Maze Engineered Air and Oil Filtration". Write Air-Maze Corporation, 25000 Miles Road, Cleveland 28, Ohio.

AIR-MAZE CORPORATION
25000 Miles Rd. • Cleveland 28, Ohio

▲ For more details circle NED-1016 J3 on enclosed inquiry slip ▲

"Multi-Pic"
WELD-CLEANING HAMMER

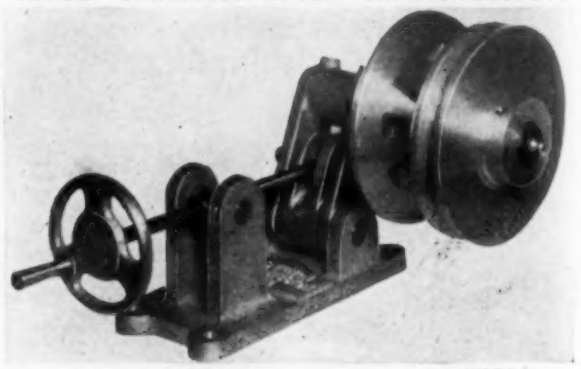


HAS 5 CONTOUR FORMING HEADS . . . . PATENTED FREE - FLOATING HEAD DESIGN DELIVERS 5 SEPARATE CLEANING BLOWS WITH EACH SWING . . . CLEANS 5 TIMES FASTER . . . LASTS 5 TIMES LONGER THAN SINGLE-HEADED HAMMERS.
Illustrated Model MP-2-M $2.40 each.
Quantity Prices 10 to 20% Less.
WOOD HANDLE AND BRUSH EQUIPPED MODELS ALSO AVAILABLE. WRITE FOR BULLETIN FORM MP6

Manufactured By
BERNARD WELDING EQUIPMENT COMPANY
10228 Avenue N. Chicago, Illinois

▲ For more details circle NED-1017 J3 on enclosed inquiry slip ▲

New! HAND WHEEL CONTROL
TEECO VARIABLE SPEED TRANSMISSION



Ideal for single groove V-Belt applications. The TeeCo Transmission is designed on the variable pitch pulley principle. Infinite ratios may be obtained between its range. Simply by turning the adjusting wheel, the tension on the belt is changed to shift the middle wheel automatically to change the pitch diameters. Adjustment may be made without stopping either motor or machine.

All aluminum construction. The TeeCo Transmission is shipped all assembled, ready to install. Attractively low priced! Write for additional information and literature.

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FASTER HANDLING at less cost
• 360° Swing • Self-Supporting
• Capacities from ½ ton to 5 tons
• Complete Line of Pillar, Mast and Wall Type Jib Cranes

Write for Catalog

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MONORAIL SYSTEMS AND RACKS

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IT'S A CINCH!
TO
SHARPEN SMALL DRILLS

Black Diamond
PRECISION
DRILL GRINDER

- ✓ ONLY drill grinder that mechanically positions drill for grinding!
- ✓ ONLY drill grinder that grinds BOTH LIPS IN ONE OPERATION!
- ✓ ANYONE can grind a drill expertly on a Black Diamond No guesswork—just position the drill, grind and you have a perfect point!

BLACK DIAMOND SAW AND MACHINE WORKS, INC.
NATICK, MASSACHUSETTS

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STOP Wasteful Equipment Repairs!

use
ANDERSON
STRAINERS as preventive maintenance

● If you practice preventive maintenance, you'll want to protect pipeline equipment with Anderson Strainers. These high quality strainers pay for themselves over and over again by protecting equipment against possible damage from pipeline scale, rust and sediment. An important feature of an Anderson Strainer is the stainless steel mesh screen—lasts much longer than bronze screens, normally used in conventional strainers. Low in price. See your distributor.

AHEAD OF...
- PUMPS
- AIR TOOLS
- REDUCING VALVES
- STEAM TRAPS
- TEMPERATURE REGULATORS

FREE! new informative folder on protecting pipeline equipment with Strainers. Write:

THE V. D. ANDERSON CO. 1958 W. 96th St., Cleveland 2, Ohio

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- DESIGN of SPINDLES and AXLES
- SELECTION of Adequate BEARINGS
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KELSEY-HAYES WHEEL COMPANY
DAVENPORT, IOWA

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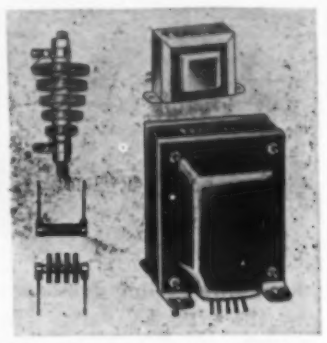
TRANSFORMERS & COILS
fabricated to specifications



A service for designing, engineering and manufacturing various types of coils and transformers to specifications is now available. Types include high frequency air core, multi-layer solenoid, peaking, synchro winding and television coils; and audio, power, high voltage, pulse application and synchro transformers. Either one or many of any unit can be engineered and produced, and there are large facilities for full-scale fabrication and assembly. The service also embraces manufacture and assembly of electronic components, sub-assemblies, and instruments. For details write **Transvision, Inc.**, Transformer & Coil Mfg. Div., 460 North Ave., New Rochelle, N. Y.

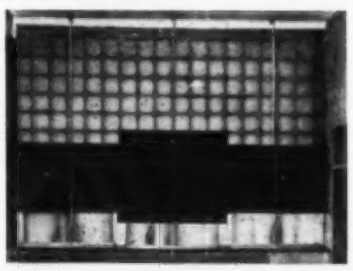
▲ For more details circle NED-1023 J3 on enclosed inquiry slip ▲

METAL ADHESIVE
gives bond with 3000 psi strength

For joining metals to either similar or dissimilar metals, Adweld adhesive compound produces bonds with a strength of approximately 3000 psi. It sets in 10 minutes after application, and requires only clamps to effect a successful joint. Applications include joining operations where there are fire or explosion hazards which preclude welding, and other manufacturing jobs where the process can effect a saving in labor and materials. Made by **Miracle Adhesives Corp.**, 214 E. 53rd St., New York 22, N. Y.

▲ For more details circle NED-1024 J3 on enclosed inquiry slip ▲

SHADING UNIT
for glass block/clear glass windows



For shading glass block/clear glass window walls where efficient and economical light control is desired, New Way shade unit consists of overlapped double roller shades mounted on the division bar between glass block and clear glass window sections. Overlapped to prevent direct light gaps, shades are entirely independent in operation, and roll up completely out of the way when not in use. A simple pulley bracket is the only top-of-the-wall fixture necessary. Shades are available in cream-white, light opaque or black cloths for any light transmission requirement. Made by **L. O. Draper Shade Co.**, P. O. Box 501, Spiceland, Ind.

▲ For more details circle NED-1025 J3 on enclosed inquiry slip ▲

NEW... BIDDLE IMPULSE CABLE FAULT LOCATOR
MODEL 4 TRANSMITTER

MORE COMPACT...LIGHTER...LOWER COST

Although designed primarily for use on lead covered cable installed in ducts, Biddle Cable Fault Locators are also used on aerial and buried cable. The new Model 4 Transmitter has a maximum output of 15 kv d-c and a discharge capacitance of 2 muf. Unit can be carried in any ordinary passenger car, to be used as a source of d-c voltage for proof testing of electrical insulation. Provides a d-c over-voltage test facility particularly suited to cables and other electrical apparatus in the lower voltage classes. It has a maximum proof testing current capacity of 15 milliamperes at about .7 megohms and about 50 milliamperes at short circuit. Requires a source of supply of about 600 va at 115 volts a-c.

Write for our new **Bulletin 65-D.** B-938

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

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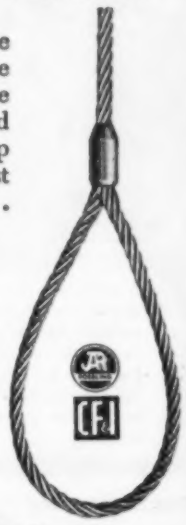
ALL-PURPOSE SLINGS
with new Roebling Tapered Sleeve Splice . . . stronger . . . cost less!



NEW ROEBLING All-Purpose Slings with the Tapered Sleeve Splice are delivered ready for the job. The unique rolled loops and tapered sleeve attachments develop full catalog strength of rope... cost less than ordinary tucked splices... save "splicing your own".

Made of Roebling "Blue Center" Steel Wire Rope, All-Purpose Slings are unsurpassed for toughness and dependability... flexible and easy to handle... come in all standard lengths and sizes. Send for full information and for the free "Sling Data Book." John A. Roebling's Sons Corporation, Trenton 2, New Jersey.

A subsidiary of The Colorado Fuel and Iron Corporation

ROEBLING

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The *safe way* to change lamp bulbs *is with* McGILL® adaptable LAMP CHANGERS

McGill Lamp Changers eliminate accident hazards in changing lamp bulbs out of arm's reach. Heights of 30 feet are easily reached by adding multiple 5 ft. steel pole sections. Each is insulated. Heads are available for almost any size and shape of lamp.

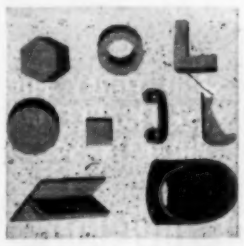
Send for Catalog No. 49-A today!

McGILL® electrical specialties

McGILL MANUFACTURING CO., INC. 101 N. CAMPBELL ST. VALPARAISO, INDIANA

▲ For more details circle NED-1028 J3 on enclosed inquiry slip ▲

THE CINCINNATI Wet Abrasive Cut-Off Machines



Cut Down ON CUT-OFF TIME!

Cut any metal, solids or tubing fast and accurately! Capacity up to 2-¼" in solids, 3-½" in tubing. Straight or angle cuts up to 45°. And look at these speeds: 2" bar stock in 15 seconds . . . 2" tubing, 3/32" wall, in 10 seconds . . . 2" angle iron, ⅛" thick, 45° angle, in eight seconds. Special features include Cincinnati's exclusive water nozzle, insuring proper coolant flow for longer wheel life; and foot-operated vise, freeing operator's hands for faster production. Write today for Bulletin 53LD.

TRADE The Cincinnati MARK

THE CINCINNATI ELECTRICAL TOOL CO.
Division of THE R. K. LeBLOND MACHINE TOOL CO.
CINCINNATI 8, OHIO

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RANDALL

THE ONLY PILLOW BLOCK WITH THESE OUTSTANDING FEATURES

WRITE FOR CATALOG NO. 109

DOUBLE LUBRICATION
QUIET OPERATION
SELF ALIGNING
LOW COST

Randall "deep well" pillow blocks are available for all standard shaft sizes in one-piece steel or two-piece cast iron housings for light, normal or heavy duty. The "deep well" ball assembly is also sold as a separate unit for integral inclusion in other original equipment applications.

BRONZE BAR STOCK
BRONZE BUSHINGS
PILLOW BLOCKS
SHEET LUBRICATOR

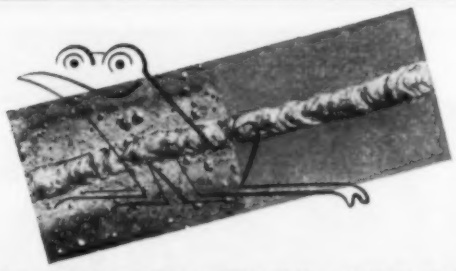
Randall

GRAPHITED BEARINGS
THRUST WASHERS
SAFETY COLLARS
BRONZE CASTING

RANDALL GRAPHITE BEARINGS, INC.

1007 S. Greenlawn Ave. Lima, Ohio

For more details circle NED-1030 J3 on enclosed inquiry slip



WARTS ARE FOR TOADS, NOT WELDS

Spatter is usually a problem in arc welding . . . but these unsightly metal warts get the quick "brush off" with Protect-O-Metal No. 2. Simply brush or spray P.O.M. on weld area and adjacent surfaces. After welding, the troublesome weld spatter wipes off with a cloth or brush.

P.O.M. No. 2 causes no smoke, fumes or odors; is non-flammable and non-toxic. One coat serves for single or multi-pass welds, costs about 1/10c per foot, saves up to 85% of weld cleaning cost and labor. Order a trial gallon today. Satisfaction guaranteed.

PROTECT-O-METAL

POM

G.W.SMITH

G. W. SMITH & SONS, INC., 5406 KEMP ROAD, DAYTON, OHIO

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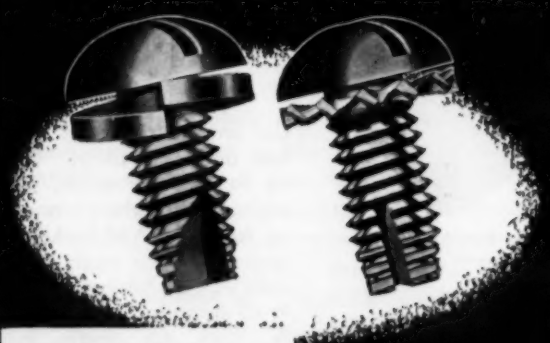
ELIMINATE TAPPING COSTS!

USE RELIANCE "THREAD-CUTTING" SPRINGTITES and SEMS



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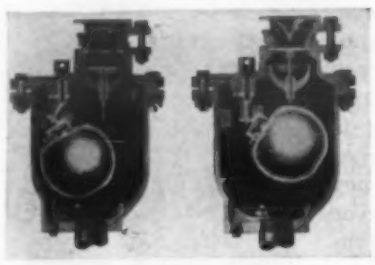
For more details circle NED-1032 J3 on enclosed inquiry slip

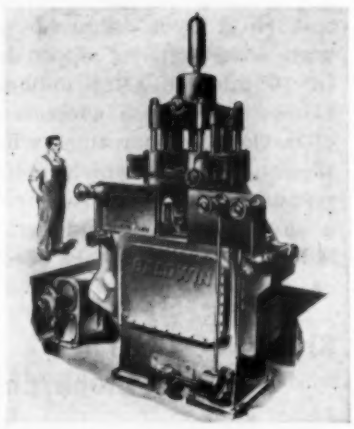
AIR RELEASE VALVE
also serves to break vacuum



Functions of automatically releasing air accumulations from pipe systems, admitting air to systems for breaking vacuums, and venting large quantities of air from pipe lines when filling systems with water can be performed by the type AV valve. Three functions are combined in the one compact unit, designed with a 2-in. threaded inlet opening. It can be used under working pressures up to 150 psi. Maximum diameter is 11½ in. and overall height is 16¼ in. Weight is 160 lb. Illustration shows valve in open position at left and in closed position at right. Made by **Simplex Valve & Meter Co.**, 6749 Upland St., Philadelphia 42, Pa.

For more details circle NED-1033 J3 on enclosed inquiry slip

COMPACTING PRESS
four-column, crank-type has rated pressure of 100 tons



Operated by variable speed-drive unit with 20-hp totally-enclosed motor, Model C compacting press is a mechanical four-column, crank type equipped with flywheel, pneumatic clutch and pneumatic brake. Rated pressure is 100 tons. Entire press mechanism is enclosed and sealed, making press suitable for compacting powdered metal as well as pressing ceramic parts and grinding wheels.

Accurate pressure is assured through use of hydraulic head, the ram of which supplies opposing pressure for upper punch. Die holder and core rod, floating independently of each other, are held in normal top position by air cylinders. Stops, adjustable by handwheels, control distance of float. Provision is made for mounting an auxiliary stationary core rod, making it possible to have both a floating and stationary core rod installed in press at same time. Press uses shuttle type feeder.

Other specifications include ejection stroke and depth of fill adjustable 0 to 6 in., 6-in. diameter die opening and 4 to 24 strokes per minute. Announced by **Baldwin-Lima-Hamilton Corp.**, Dept. T. E., Philadelphia 42, Pa.

For more details circle NED-1034 J3 on enclosed inquiry slip

This New Small Flow Valve Just Won't Quit!

Proven under pressure in 2 years of rugged field tests, new Leslie SMALL FLOW Reducing Valve fills the bill where small flows of steam, air, gas or liquid are a problem. Famous Leslie quality and design means you set it and forget it.

Easy to size for top performance
Send for really complete data in Bulletin 511-A.

TRADE LESLIE MARK

THE FIRST NAME IN PRESSURE, TEMPERATURE AND LEVEL CONTROLS
Since 1900

2639

LESLIE CO., 227 Grant Ave., Lyndhurst, New Jersey

For more details circle NED-1035 J3 on enclosed inquiry slip

Free MANUAL for CARPENTERS & WOODWORKERS

48 Pages telling HOW—WHEN—WHERE to use a Portable ROUTER

Heard About Porter-Cable's Amazing New Router Chuck? It's the sensation of the tool industry! Works on an entirely new principle. Exclusive *Kamgrip Chuck* grips the bit tighter—keeps it aligned—prevents shank galling—assures accurate cuts!

Exclusive with Porter-Cable. Standard on Models 511 & 514—plus more powerful motors, oversized sealed bearings, Dial-O-Matic depth adjustment.

NEW LOW PRICES! Model 511, 22,000 rpm—$125.00 Model 514, 20,000 rpm—$209.00

Porter-Cable Machine Co.
1409 N. Salina St., Syracuse 8, N. Y.
(In Canada: Strongridge, Ltd., London, Ont.)

Porter-Cable
Quality Electric Tools

For more details circle NED-1036 J3 on enclosed inquiry slip

POR-ROK (POUR ROCK)

Fast Setting Cement

PERMANENTLY ANCHORS BOLTS IN CONCRETE WITHIN 30 MINUTES!

Securely fastening machinery, hand rails, seats, fixtures or any type of equipment to concrete by means of anchor bolts can now be done quickly, easily and safely with Por-Rok Quick Setting Cement.

Por-Rok successfully replaces lead and sulphur, and costs considerably less. Applied cold, there is no heating hazard. Simply mix Por-Rok powder with water and pour around bolt. Within 30 minutes the cement sets hard and the bolt is anchored permanently.

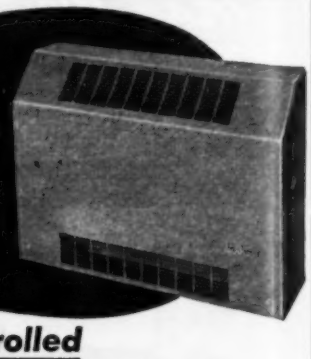
Por-Rok also makes quick, lasting repairs to holes and breaks in concrete floors with little or no interruption to normal traffic. It is self-bonding, self-leveling, oil-resistant, does not shrink. Compression strength of 4500 lbs. p.s.i. in one hour GUARANTEED.

For complete information—without obligation—write

THE HALLEMITE MFG. CO.
2452 WEST 25th ST. • CLEVELAND 13, OHIO SINCE 1937

For more details circle NED-1037 J3 on enclosed inquiry slip

NEW Dunham VARI-TEMP CABINET



Gives Room-Controlled Heating, Cooling, Ventilating

Here's year 'round air conditioned comfort . . . at moderate cost. New, compact Dunham "Vari-Temp" Cabinets with twin blower fans heat, cool, ventilate, filter and dehumidify air . . . *all on an individually room-controlled basis.*

Simple and economical to install on floors, walls, and ceilings. No central system duct work needed. A single riser, connected to the unit, supplies hot water for heating; chilled water for cooling. Units are also available for heating with steam coil, or heating and ventilating with non-freeze steam coil.

One "Vari-Temp" delivers same amount of heat as *five radiators* its size. Three sizes available.

For full information WRITE FOR BULLETIN NED-9.

DUNHAM HEATING SYSTEMS AND EQUIPMENT

C. A. DUNHAM COMPANY, 400 W. Madison St., Chicago 6, Illinois

For more details circle NED-1038 J3 on enclosed inquiry slip

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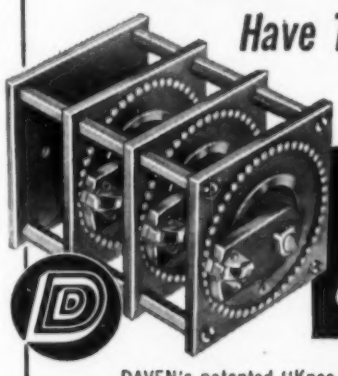

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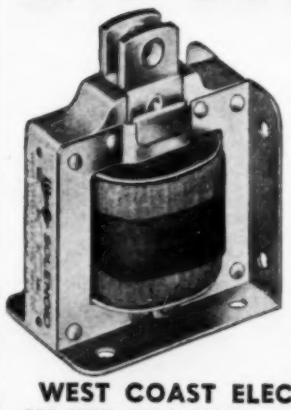

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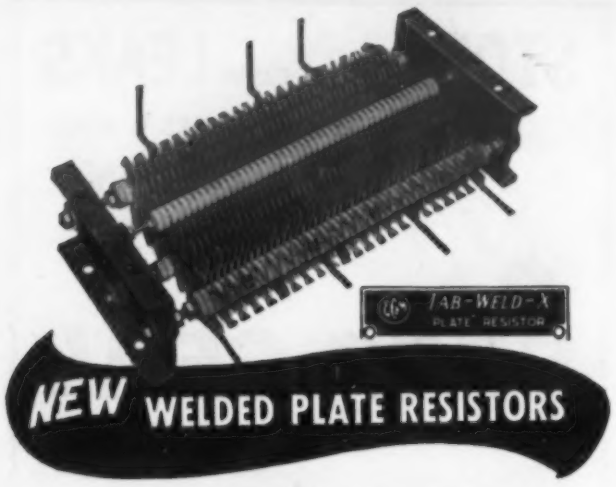

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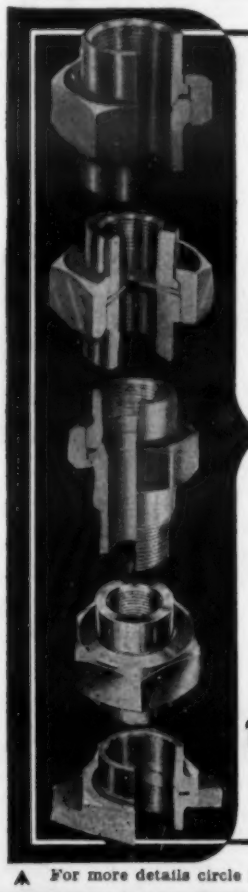

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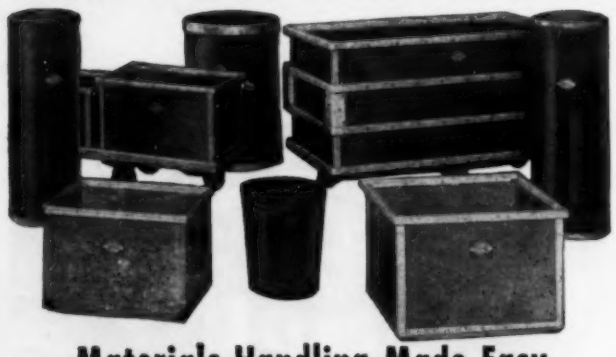

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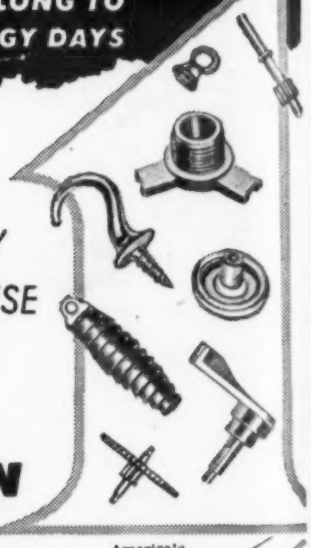

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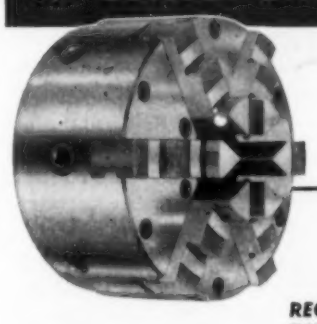

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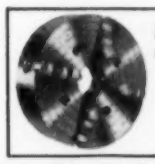

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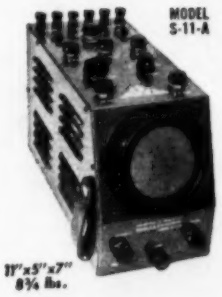

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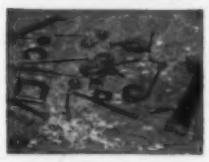

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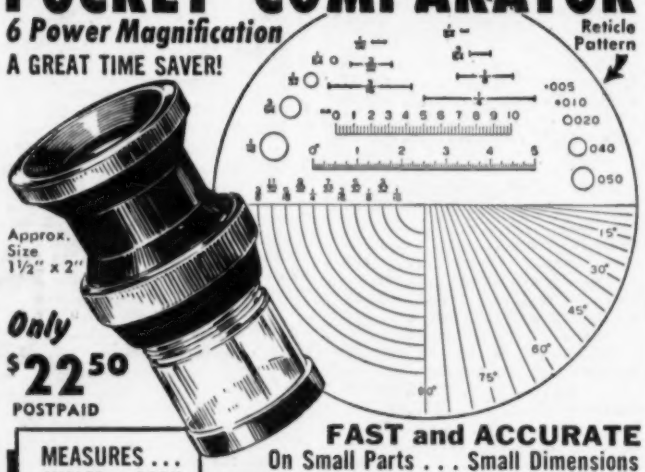

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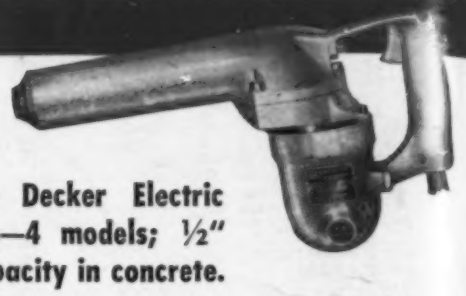

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